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H. A. King's Hive, Claims, and Patents.

As some of our readers may have misconceived the purpose of the remarks we made, in the February number of the Journal, respecting Mr. H. A. King and his patents, or may be induced to attribute them to motives which certainly did not influence us in preparing them, we regard it as only just and fair to the bee-keeping community, to Mr. King, and to ourselves, to make a formal and full exposition of his claims, and of the true character of his three patents.

In doing this we take up Patent No. 1, bearing date November 24th, 1863, which was applied for and granted to H. A. King and Jacob Loughmaster.

The claims in the application for this patent, were as follows:

First, the slide *B*, provided with the notches *d*, *d*, and applied to the hive as shown in combination with the openings *b*, and pillars *c* at the front of the hive, as and for the purpose set forth.

Second, the projections on the top and bottom bars, *o*, *p*, of the comb frames *G*, to serve the two-fold purpose of keeping the comb frames at a proper distance apart, and at a proper distance from the walls of the hive.

Third, the fitting of the honey-board *E* on the rebates *ll* within the hive, and also the fitting of the slide against the rebates *g g* in a similar way, in the manner and for the purpose specified.

Fourth, the cross-bar *K* at the upper end of the slide *f*, provided with bevelled notches *jj*, to fit over the bevelled surfaces *i*, at the upper ends of the front and back of the hive, for the purpose specified.

Fifth, securing the cap *H* on the hive, by having the frames of sufficient dimensions to fit on the top of the body *A*, and securing strips *s* within the cap *H*, to rest on the top of the body *A*, and support the cap as set forth.

Sixth, the flap or slide *W*, attached to the hive and provided with holes *a*, *c*, in combination with the holes *v*, *b*, in the side of the hive, and the groove *t* in the inner surface of the side of the hive, as and for the purpose specified.

The first, second, and sixth of these claims were rejected *in toto* by the Patent Office. The third was granted, with a modification restricting it to the "fitting of the honey-board *E* on the rebates *ll*, within the hive." The fourth and fifth claims were allowed, as they stand. None of these claims, either separate or in combination, cover anything of special value in the construction or use of a hive; while the infringement of the Langstroth patent consisted in the use of the movable frames with separated tops, and the shallow chamber, without license from the owners of said patent. The infringement was long since acknowledged by Mr. King, and it is therefore not

necessary to dwell on this point; but we wish to state here, and desire it may be borne in mind, that the rejected second claim was for a frame substantially similar to that of the Berlepsch hive, in use in Germany since 1853, not patented there or in this country, and which of course was public property here *ten* years before Mr. King endeavored to obtain a patent for it. He may not have been aware of this when he made his application, but it is a fact nevertheless.

We proceed to Patent No. 2, granted October 10th, 1865, on the application of H. A. King, N. H. King, and F. S. Walker.

The claims made in the original specification were as follows:—

First, the movable block *t* used in connection with the slides *B*, for enlarging or contracting the entrance, for the purposes set forth.

Second, the bottom bar *p* made to form the comb-guide *r* and double projections *g*, to secure straight combs of proper thickness and keep the frames an exact distance apart and from the walls of the hive.

Third, the top bars *o* with openings *c* made to form a chamber floor to avoid the usual air space above and between the frames and bring the surplus honey-boxes in connection with a double tier of honey-boxes, or the placing of one or more boxes upon another box or boxes, operated substantially as set forth.

Of these claims the first and third were rejected. Another claim was then substituted for the first, which was granted, and reads thus:—

"First, the comb-frames *D*, provided with upper and lower bars *o*, *p*, constructed and arranged substantially as and for the purposes described.

The second claim was modified and then allowed. It reads as follows:—

Second, the lower bar *p* of the comb-frames, bevelled so as to form the comb-guide *r* for the purpose of securing straight combs, and provided with the double projections *g* to keep the frames at a proper distance from each other and from the walls of the hive.

Here are two attempts, by resort to mere combination, to secure a patent on two several things that were public property long before; namely, the triangular comb-guide or bevelled strip suggested by the celebrated surgeon John Hunter, of London, in 1793; and the double projections used in the Berlepsch hive ten years before, "as and for the purposes described," and which was already rejected among the claims for Patent No. 1. These things were and are public property, and never should have been patented in any form of combination with frivolous and useless devices. The endeavor also made to form an air-chamber, and thus "avoid the usual air space," seems to be the same grand discovery elsewhere proclaimed by Mr. King as "destined to revolutionize

all other systems of bee-keeping." The latter claim was rejected by the office, and the former was granted only in combination with a modification of the frames inefficient "for the purposes set forth" of securing straight combs. The use of the movable frame in the hives thus constructed was so obviously an infringement of the Langstroth patent, that Mr. King agreed to pay Mr. Langstroth a percentage for the privilege of using it in Mr. L.'s territory.

We now reach the "grand climacteric," Patent No. 3, dated September 8th, 1868.

In this case the application was originally made April 13th, 1863; and the claims then made were as follows:—

First, forming comb-guides of thin strips of wood, of any desired width, as described and for the purposes set forth.

Second, forming comb-guides of thin strips of wood, each alternate comb-guide being wider than the intervening guides, as and for the purposes set forth.

Third, waxing strips of wood or other substances and pressing the wax to form the base of cells of worker comb, for the purposes set forth.

Fourth, the close-fitting top bars *o* with slots *j*, constructed as and for the purposes set forth.

Fifth, the triangular strips *g*, with the projecting nails *v* to hold the frames in their place and from the walls of the hive.

Sixth, a double tier of honey boxes, with slots, as described and for the purposes set forth.

Seventh, the adjustable strips *w*, to hold the close-fitting top bars together and against the movable sides.

On these claims the Examiner in charge remarked, June 11th, 1868, "the applicant should state more explicitly what the comb foundations in the honey-boxes are, and how they are affixed. Sawkerfs referred to [in the specification] are not found in the drawing or model." Returned to be amended. Again, July 16th, 1868, "the first claim is fully met by patent of Edward Kretchmar, July 28th, 1867. The description in the specification of this patent containing a clear reference to this device. Third claim anticipated by patent of Henry A. Tozier, October 9th, 1866. The first part of fourth claim is rejected in view of the patent of Samuel & Minor Taylor and Edmund Cox, February 13th, 1866. In relation to the second part of said claim, a pending application shows stamped comb foundations, and it is believed to be not new. This specification contains much superfluous matter, and is not sufficiently specific in some particulars relating to construction. Should be returned and corrected according to pencil notes." July 19th, 1868, the applicant is informed that "neither model nor drawing exhibits a wax-line foundation in the surplus honey-boxes. The first claim should therefore be limited to what is shown, viz., comb foundations in combination with the long slots *g* in a double tier of honey-boxes, as shown and described."

Finally, the patent was issued September 8th, 1868, with the following descriptions and claims granted:

"Through the top of the lower honey-boxes are slots, at right angles with which latter are placed the guide-combs. Slots are formed in the upper of the top bars, between which latter are nailed the comb-guides.

Claim 1.—The slots *z*, in connection with a double tier of honey-boxes with comb foundations, as specified, and for the purposes set forth.

2. Constructing the close-fitting top bars *O*, with comb-guides *U*, and slots, as specified, and for the purposes set forth.

We see, from the Examiner's report above, that the claim absolute to the comb foundations was distinctly rejected as not being a new invention, and is

finally allowed only in connection with slots and a double tier of honey-boxes. There is no patent granted on it *per se*, distinctly or specifically. Yet, in the face of this, Mr. King, in his paper for May, 1870, presents the reader with an engraved illustration of a machine, which is introduced to notice after this fashion: "The engraving represents a machine for making worker-comb comb-guides, invented over two years ago, by H. A. King, and secured by letters patent September 8th, 1868." Now let the reader carefully scrutinize this statement, and while doing so, bear in mind that there is only one patent granted to H. A. King, September 8th, 1868, namely, this same patent No. 3, already so minutely described. What does the language here used purport to mean? Is it the "machine" which is claimed to have been then patented? Certainly not! No machine is anywhere mentioned or alluded to in this patent. Well, then, is it the "worker-comb comb-guides" that are claimed as having been patented? That cannot be, for we have seen that the claim for them was explicitly rejected? Yet the language implies one of these things, or the other. He has a patent for their use in a particular combination, yet he is making them by a machine and selling them separately as comb-guides or foundations, under the assumption that he has a patent, either on them or on the machine by which they are made, while the plain truth is that he has no such patent.

The history of those comb foundations is somewhat curious, and being altogether pertinent, may as well be related here in passing. These foundations are substantially the invention of Mr. Mehring, of Rhenish Bavaria, in Germany, made in 1858, and referred to, described and figured in the third edition, page 373, of Mr. Langstroth's work on the "Hive and Honey Bee," published in 1859. We quote the passage: "This figure shows the form of a metallic stamp invented by Mr. Mehring, of Bavaria, in Germany, for printing or stamping the foundations of the combs upon the under side of the frames. After the outlines are made, he rubs melted wax over them, and scrapes off all that does not sink into the depressions. Mr. Mehring represents the device as enabling him to dispense with guide-combs, the bees appearing to be delighted to have their work so accurately sketched out for them. In first using the triangular guides, I waxed their edges, but soon found that this was unnecessary. Mr. Mehring's foundations may also be found to answer without any wax. Mr. Wagner suggests forming these outlines with a simple instrument something like a wheel cake cutter. Where a large number are to be made, a machine might easily be constructed which would stamp them with great rapidity." We have here plainly the original idea of Mr. King's comb-guides and of his machine for making them with rapidity; but as that part of this account of Mr. Mehring's invention which referred to the suggestion for this purpose, appeared in only a portion of one edition of Mr. Langstroth's book, (having been subsequently omitted to make room for other matter,) it should by no means be supposed that Mr. K. saw it and acted on the hint it furnished—making an invention and contriving a "machine," which he imagines he has patented. Oh no, by no manner of means! It is simply one more of those striking coincidences which show that great minds will think very much alike, when contemplating the same subject intensely. Having now made one more "great discovery," by finding that he has all along been laboring under a delusion, it is to be hoped he will cease to make and sell patented comb foundations. He will find *unpatented* articles much more popular, in his neighborhood.

But let us now return from this seeming digression, to the beautiful features of patent No. 3.

What strikes us as peculiarly remarkable in this regard is the fact, that after having incurred the trouble and expense of procuring three patents, Mr. King should successively abandon them all, condemning and rejecting his own devices. Certainly, if actions speak louder than words, he has done this very thing. In his circulars for 1871, he exhibits as his own, a style of hive in which, with two exceptions, (and the things excepted can have substituted for them unpatented devices, which are superior in effecting the purpose desired,) he *leaves out everything which he claims to have invented and patented in his three patents*. The cross-bar, with all its patented appendages, disappears, and the frame is made as simple as possible. This is the style of hive he is now making and selling; and it can be easily shown that (with the two exceptions alluded to), if this hive is not covered by the Langstroth patent, as we believe it to be, it is public property. The assertion has often been made, by intelligent practical bee-keepers, that a hive can be made almost exactly resembling the King hive in external appearance, and so made that when opened it shall be found to contain not a single feature patented by King, which, nevertheless, when examined by experts, shall be pronounced to be **A MUCH BETTER hive than the King hive**, precisely because it has none of his patented features. But who could have thought that Mr. King himself would do this very thing; as he has done, according to his own circulars? Thus demonstrating by his own act and the hives he is now making and selling, not only that he has made no invention of any special importance; but that, to keep his hive in the market, he has found it necessary to disuse and thereby discredit his own patents.

Our object in this article has been simply and plainly to expose what we believe to be false pretensions and baseless claims. In doing so we have restricted ourselves closely to this, allowing nothing personal to divert us therefrom. And now, to avert all misconception or misconstruction, we here offer the columns of the American Bee Journal to the extent of two pages monthly for three months to come, to Mr. King, for anything he may have to say in refutation of our remarks, or in explanation, exculpation or vindication of his course as a patentee, inventor or dealer in bee-hives, or articles in connection therewith. And, should Mr. King fail to avail himself of this offer, we extend it to any purchaser of territorial rights under him, who may feel disposed to undertake the task.

[For the American Bee Journal.]

H. A. King's and L. L. Langstroth's Patents.

In the spring of 1837, Mr. H. A. King entered into an arrangement with L. L. Langstroth & Son, by which he agreed to pay a certain sum on all sales of hives, rights and territory subject to his patents, when such sales were made in territory still owned by Langstroth. The agreement confined him to the use of certain *slots* in the topbars of his frames, for admitting bees to top boxes, as shown in a model deposited with Langstroth & Son—that is, he was allowed to use the Langstroth frames with tops partially separated, and no other patented feature of that invention. On September 8th, 1868, Mr. King took out a patent under which he no longer uses the *slots* or notches by which the tops of his frames were partially separated; but substitutes *mortices* for them in the tops of the frames, thus allowing those tops to fit closely together throughout all their length. To inquiries frequently made whether we considered

those mortices an infringement of our patent, if used without proper license, we replied in substance that we did not. It was obvious to us that this mortgage enabled Mr. King to use an important feature in my invention, and one very fully set forth, both in the original patent and the re-issue, viz., the allowing bees to pass above the frames, into supers, so that the honey might be obtained in the most beautiful and salable form, and be safely removed from the hive even by timid and inexperienced persons—a thing never even contemplated in any movable frame hive before mine. Still it seemed to me that it did not conflict with the wording of my claims, and that therefore I could not prevent its use without another re-issue and better wording of my claims; and as such re-issue would have relieved all parties from liability for any previous infringement, we thought it best to acquiesce in its use.

In the spring of 1870, only a few days before the death of my son, Mr. King notified us that as he had not for some time used the notches or slots for which he agreed to pay us a percentage on all his sales in our territory, he must decline paying us anything more under that agreement. Having now recovered my health so much as to be able to examine his patent more thoroughly, and having taken the ablest legal advice to be procured, I am satisfied that Mr. King's mortices will be pronounced by the Courts to be "a mere colorable evasion," and therefore a substantial infringement on my rights. Having already, in a personal interview, informed Mr. King of the view I now take of this matter, justice to him, and to those parties intending to purchase under him, supposing that his hive is confessedly no infringement upon mine, renders it proper that I should make this public statement. Those parties also, who have purchased under my patent, and who have been damaged in their pecuniary interests by an opinion given by me without proper legal advice, have the right to demand that I should take the earliest opportunity to state that I regard the use of Mr. King's mortices, or any equivalent device for the purpose of passing bees above the frames into boxes, to be an infringement upon my patent, and as licensed to be used by the owners of said patent; and that the earliest possible steps will be taken to have the matter decided by the United States Courts.

L. L. LANGSTROTH.

Oxford, Ohio, March, 1871.

To the Bee-keepers of the United States.

It is well known that L. L. Langstroth's Patent of October 5th, 1852, was re-issued May 26th, 1863. Though satisfied that the original patent would be held by the Courts to cover all that I wished to claim, the re-issue was asked for to enable me more fully and clearly to show exactly what I had done and claimed; so that, in case of litigation, no time need be lost in ascertaining those all-important points. When making my application, I carried to the office every book, in English, German, and French, which I could procure from Mr. S. Wagner's library and my own—the former containing probably the largest collection of German, and the latter of English works pertaining to bee culture, to be found in this country. Prof. C. G. Page and Mr. Addison M. Smith were at that time the Examiners in charge, before whom my application properly came. There being then very few works on bee culture in the library of the Patent Office, they were thus enabled to examine my case with all the information which I had been able to procure from any source, having any bearing on the

subject of movable comb hives—as I desired nothing which could not be granted to me with the fullest information within their reach. Mr. Page is no longer living, but Mr. Smith is now a solicitor for patents in Washington. My original specification for the re-issue (which I was requested by the office to abbreviate, but which is still on their files) very clearly points out the essential difference between my invention and those of Huber, Munn and Debeauvoys, as will be seen from an extract from a communication published in the *PRAIRIE FARMER*, in October, 1866.

“Prior to the re-issue of Mr. Langstroth’s patent in 1863, the opposition had relied on the idea that his patent was anticipated by foreign inventions; but at the time of the re-issue, and on the hearing now, *Mr. Langstroth himself furnished and laid before the office every work having any bearing on the subject, both foreign and native, nearly thirty in number*, embracing some very rare works—one being the only copy existing in this country. On the recent hearing, they abandoned, wholly, the idea of its being anticipated by any foreign invention, and relied on the effort to prove a prior invention in this country—*no less than four of them swearing that they had invented or used the same thing prior to Langstroth!* But these parties had done what Job so fervently desired his enemies to do—they had each of them “written a book!”—and those books—if there had been no other testimony—were sufficient to decide the case against them. There probably has never been a case in the office in which there was so much of fraud and perjury as was furnished on the part of the opposition in this case; and it is no wonder that both the Examiner and Commissioner came to the conclusion that the testimony was “*not worth consideration.*”

The application for the extension of my patent was hotly contested. Most of the parties who fought it have passed off from the bee-stage, and I have never regretted that I did not spread before the public, the testimony now in the records of the Patent Office, which would have consigned some of them to infamy; and which might, if pressed home, have placed others in the penitentiary. I can confidently appeal to the bee-keeping public who have known my course, to bear me out in the assertion that I have never personally assailed any one, but have often, under circumstances of great provocation, refrained from using very damaging facts against those who have assailed me.

The generous treatment which I received from the two Bee-keepers’ Conventions, at Indianapolis and Cincinnati, have, I trust, put to rest forever all the aspersions which have been heaped upon me by ignorant or designing men, as being the mere *introducer* of a foreign invention, which, with some unimportant modifications, I am charged with having patented and attempted to palm upon an unsuspecting public as my own. If ever these charges are again made, by those who know the facts, they must renounce all claims to truth, honor, or even common decency.

In the contest, which must soon come before the courts of law, I hope that every legitimate weapon which can be used to break down my patent, will be brought forward; and I now hereby invite all the bee-keepers of the United States, and all anywhere else, who may see this appeal, to send to H. A. King & Co., 240 Broadway, New York, against whom suit has been brought for infringing on my patent—any information contained in books or printed publications, in any language, prior to the issue of my patent, (October 5th, 1852,) which seems to have any adverse bearing on my case, and to bring forward any knowledge which they may possess of any invention made in this country, but not described in print, by

which the claims of my patent may be either weakened, limited, or invalidated. I stand upon what I believe to be my rights. If I have none, but am unfortunate enough to be the honest *original* inventor, who, to his surprise and sorrow, finds that he was not the *first* inventor, the sooner I know this, the better; that I may at once cease from claiming what would then belong to the public, and not to me.

L. L. LANGSTROTH.

Oxford, Ohio, March, 1871.

[For the American Bee Journal.]

The Proposed Langstroth Memorial.

MR. EDITOR:—I desire through the columns of our Bee Journal, to thank the bee-keepers who, at Cincinnati, proposed to raise a testimonial fund for my benefit.

I must, however, most respectfully decline receiving any money which may be contributed for this purpose. From the report you published of the proceedings of the Association, it may be inferred that I did what I properly could to prevent that body from sanctioning the measure proposed. The reporter of those proceedings hardly does justice, however, to the strong expressions which I used to induce an abandonment of the testimonial project. The report states that “Mr. Langstroth said he *hated* to have his private affairs occupy the time of the Association,” and the chairman, Rev. Mr. Van Slyke, fearing that I might be misunderstood, put the direct question to me: “You do not intend to reflect on the Committee or the Association.” As the time for adjournment had nearly arrived, I ceased further opposition, but now embrace the first favorable opportunity to put myself right before the bee-keeping public.

Perhaps I can in no better way express my feelings on this subject than by quoting from an article written by me for the July number of the Journal for 1869, page 20, under the caption of JUSTICE,* as follows: “It is with increasing reluctance that I am compelled so often to obtrude upon the public my claims, and the various ways in which they have been ignored by many bee-keepers; but if your readers feel under any obligation to me for the invention of a hive which has confessedly given a new impulse to bee-culture, I can easily show some of them a way in which they can do me justice. Let them read my article in this number in ‘reply to B. C. Auchampaugh’s questions about patent rights and claims,’ also the advertisement of L. L. Langstroth & Son, showing what territory in the extended patent is still controlled by them. If they are using any style of hive clearly covered by my claims, (see page 152 of the 8th number, volume 4 of the BEE JOURNAL,) no matter of whom they may have purchased the patent, they are using my property, for which they have paid me no equivalent. Our advertisement will show them how they can do us justice.

“It is true that the larger part of the most

* The title of the article quoted from was originally, “JUSTICE, NOT CHARITY,” but I changed it at the suggestion of a friend, who thought that I might be regarded by some as reflecting on Mr. Walter Hewson, whose friendly notice suggested the remarks.

valuable territory has passed out of our hands, belonging now to Mr. R. C. Otis, of Kenosha, Wisconsin, who, by his untiring energy, has perhaps done more than any other person to introduce the movable frame principle to the public, and who has not yet received any adequate remuneration for the time, money, and energy which, since 1856, he has devoted to this business; but, like myself, is a poorer man for all he has done."

I have not changed my sentiments since the above was written. Let no one, therefore, contribute to the fund with the expectation that I can be induced to accept any part of it. I will, however, now suggest a way in which what has been or may be subscribed to it, may be used, so as to be truly honorable to the bee-keepers of North America.

If my movable comb frames have effected a great revolution in bee-keeping in this country, the honey-emptying machine of Maj. Von Hruschka will so carry on the good work that it will be safe to say that the Hruschka (for no other name should be given to his device) will at least double the yield of honey attainable without it. Let us then raise money enough to procure a beautiful gold medal with suitable devices and send the same to Maj. Von Hruschka, as a slight testimonial of our grateful appreciation of the important aid he has rendered us, in being the first to suggest and employ centrifugal force to empty honey from the comb.

L. L. LANGSTROTH.

Oxford, Ohio, March, 1871.

[For the American Bee Journal.]

The Poison of the Honey Bee as a Medicine.

In the first edition of my work on the "Hive and Honey Bee," published in 1853, I said:—

"An intelligent Mandingo African informed a lady of my acquaintance, that they do not in his country, dare to eat *unsealed* honey until it is first *boiled*. In some of the Southern States all unsealed honey is generally rejected. It appears to me highly probable that the noxious qualities of the honey gathered from some flowers, is for the most part evaporated before it is sealed over by the bees; while the honey is thickening in the cells. Boiling the honey would of course expel it more effectually, and it is a well ascertained fact that some persons are not able to eat even the best honey with impunity, until after it is boiled! I believe that if persons who are injured by honey, would subject it to this operation, they would usually find it to exert no injurious influence on the system."

"I have met with individuals upon whom a sting produced the singular effect of causing their breath to smell like the venom of the enraged insect."

"While the poison of most snakes and many other noxious animals affects only the circulating system, and may therefore be swallowed with impunity, the poison of the bee acts powerfully, not only upon the circulating system, but upon the organs of digestion."

"An old writer recommends a powder of dried bees for distressing cases of stoppages; and some of the highest medical authorities have recently recommended a tea made by pouring boiling water upon bees for the same complaint, while the homœopathic physicians employ the poison of the bee, which they call *apis*, for a great variety of maladies. That it is

capable of producing intense headaches, any one who has been stung, or who has tasted the poison, very well knows."

"Bees often thrust out their sting, in a threatening manner, even when they do not make an attack; when extruded from its sheath, it exhibits a minute drop of poison on its point, the odor of which is quickly perceived, and some of it is occasionally flung into the eye of the apiarian, causing considerable itching." *Edition of 1857.*

I have known for many years that many of the peculiar effects produced upon the human system by honey, were owing mainly, if not entirely, to the poison of the bee in the honey eaten. I know of no one before me who has called the attention of medical men to this important fact.

Every experienced bee-keeper knows that it is next to impossible to remove honey from a hive without exciting the bees; the least tap upon the hive causes them to thrust out their stings, and thus to bedew the combs with their poison, so that every disturbing influence causes an effusion of more or less poison, even when the honey is not, at the time of this disturbance, taken from the hive. This poison, adhering to and drying upon the honey comb, will, for a very considerable time, be active in its effects*. It is a well-known fact that some persons cannot eat even a very little honey without distressing cholic pains; and I have repeatedly demonstrated that if the honey is boiled, or brought nearly to the boiling-point, such persons can eat it with impunity—while they cannot eat safely a small quantity of loaf sugar in which some of this bee-poison has been put. As the bee-poison is very volatile, slightly boiling the honey seems to dissipate it entirely.

The fact that there is almost always more or less bee poison in the honey of commerce, and that many of the peculiar symptoms caused by eating honey are attributable to this poison, opens a new source of inquiry to the medical world; and they can now use the vast stores of facts and opinions as to the medical virtues of honey, furnished by Aristotle, Hippocrates,† Galen, Pliny, and a host of old and medical authors.

It is obvious from these remarks, that the remarkable effects claimed by the homœopaths to be produced upon the human system by the bee poison, and which they have regarded as quite a recent discovery, may be traced back almost to the remotest antiquity, and found to have equally important relations to the old schools of medicine.

Schuckard, in his recent work on "BRITISH BEES," says: "The earliest manuscript extant, which is the medical papyrus, now in the Royal Collection at Berlin, and of which Brugsch has given a fac-simile and a translation, dates from the nineteenth or twentieth Egyptian dynasty, accordingly from the reign of Ramses II., and goes back to the fourteenth century before our era. But a portion of this papyrus indicates a much higher antiquity, extending as far back as the period of the sovereigns who built the pyramids, consequently to the very earliest period of the history of the world.

"It was one of the medical treatises contained within the temple of Ptah, at Memphis, and which the Egyptian physicians were required to use in the practice of their profession, and if they neglected such use, they became responsible for the death of such pa-

* Those using the Hruschka or centrifugal machine for emptying honey from the combs—so named after its inventor Maj. Hruschka—should be careful to heat nearly to the boiling-point all Hruschkaed honey, to be sure that the poison of the bee has been effectually expelled from it. This is the more necessary, as the process of removing for emptying is more likely to excite the bees than the simple removal of the honey in boxes.

† Born 460 years before Christ.

tients who succumbed under their treatment, it being attributed to their contravening the sacred prescriptions. This pharmacopœia enumerates amongst its many ingredients, honey, wine, and milk; we have thus extremely early positive evidence of the cultivation of bees. That they had been domesticated for use in those remote times is further shown by the fact mentioned by Sir Gardiner Wilkinson, of a hive being represented upon an ancient tomb at Thebes.

"It may have been in consequence of some traditional knowledge of the ancient medical practice of the Egyptians, that Mahomet, in his Koran, prescribes honey as a medicine. One of the Suras, or chapters, of that work, is entitled 'the Bee,' and in which Mahomet says:—The Lord spake by inspiration unto the Bee, saying: 'Provide thee houses in the mountains and in the trees [clearly signifying the cavities in the rocks and hollows of trees, wherein the bees construct their combs], and of those materials wherewith men build hives for thee; then eat of every kind of fruit, and walk in the beaten paths of thy Lord.' There proceedeth from their bellies a liquor, wherein is a medicine for men. Verily, herein is a sign unto people who consider.

"It is remarkable that the bee is the only creature that Mahomet assumes the Almighty to have directly addressed. Al-Beidawi, the Arabian commentator upon the Koran, whose authority ranks very high, in notes upon passages of the preceding extract, says, 'The houses alluded to are the combs, whose beautiful workmanship and admirable contrivance no geometriician can excel.' The 'beaten paths of thy Lord,' he says, 'are the ways through which, by God's power, the bitter flowers passing the bee's stomach, become honey; or, the methods of making honey he has taught her by instinct, or else the ready way home from the distant places to which that insect flies.' The liquor proceeding from their bellies, Al-Beidawi says, 'is the honey, the color of which is very different, occasioned by the different plants on which the bees feed; some being white, some yellow, some red, and some black.' He appends a note to where Mahomet says, 'therein is a medicine for man,' which contains a curious anecdote. The note says, 'The same being not only good for food, but a useful remedy in several distempers.' There is a story that a man once came to Mahomet, and told him his brother was afflicted with a violent pain in his belly; upon which the prophet bade him give him some honey. The fellow took his advice; but soon after, coming again, told him that the medicine had done his brother no manner of service. Mahomet answers: 'Go and give him more honey, for God speaks truth, and thy brother's belly lies.' And the dose being repeated, the man, by God's mercy, was immediately cured."

Butler, in his "FEMININE MONARCHY," speaks as follows:

"Honey is hot and dry in the second degree; it is of subtle parts, and therefore don't pierce as oil, and easily passes into the body. It has a power to cleanse, and some sharpness withal, and therefore it openeth obstructions: it cleareth the breast and lights of those humors which fall from the head to those parts: looseth the belly, and purgeth the foulness of the body, and provoketh urine: it cutteth and casteth up phlegmatic matter, and therefore sharpeneth the stomachs of them, which by reason thereof have little appetite: it purgeth those things which hurt the clearness of the eyes: it nourisheth very much: it breedeth good blood: it stirreth up and preserveth natural heat, and prolongeth old age: it keepeth all things uncorrupt, which are put into it, and therefore physicians do temper therewith such medicines as they mean to keep long; yea, the bodies of the dead being embalmed with honey, have been thereby pre-

served from putrefaction. It is a sovereign medicament for outward and inward maladies. It helpeth the griefs of the jaws, the kernels growing within the mouth, and the squinancy or inflammation of the muscle of the inner gargil, for which purpose it is gargarized and the mouth washed with it. It is drunk against the biting of a serpent. . . . All which premises being considered, no marvel though the wise king said *My son eat honey, for it is good.* . . . Yea, honey, if it be pure and fine, is so good in itself, that it must needs be good even for them whose queasy stomachs are against it."

Butler refers to Aristotle, Galen, Pliny, and a number of old writers. Having no time now, to examine what all these old and modern writers have said on the virtues of honey, and to show in how many instances the effects produced by its use upon the human system, must have been owing to the presence of the bee poison,* a few quotations from the elder Pliny (born Anno Domini 23) on the virtues of honey, will be of peculiar interest. I extract from Holland's translation, published in London, in 1601.

"Honey combs given in a gruel made of furmitle first parched and dried at the fire, is singular for the bloody flux and exulcation of the bowels." Vol. 2, page 137. "In the throat the kernels of each side thereof called the tonsils, for the squinancy (quinsy), and all the other evils befalling to the mouth, as also for the dryness of the tongue through extremity of heat in fevers, it is the most sovereign thing in the world," page 135. "Honey boiled is singular for the inflammation of the lungs and for the pleurisy; also, it cureth the wounds inflicted by the sting or teeth of serpents. . . . Honey, together with the oyle of roses, dropped into the ears, cureth their stinging and pain. . . . being used simply alone, and not compounded with other things, it is hurtful to the eyes, and yet others give counsel to touch and anoint the corners of the eyes therewith, when they are exulcerate." "It is an excellent thing for them that be stung, to take the very bees in drink, for it is an approved cure." . . . "As touching divers sorts of venomous honey, I have written already; but for to repress the poison thereof, it is good to use other honey wherein a number of bees have been forced to die; and such honey so prepared and taken in time, is a sovereign remedy for all the accidents which may come by eating or surfeiting upon fish." Page 363. The italics are mine.

I will close by relating a conversation I had two weeks ago with Mr. Eli Whitney, of New Haven, (Conn.,) son of the celebrated Eli Whitney, inventor of the cotton-gin. Knowing the interest I took in bees and honey, he told me that for years he had suffered from acute chronic catarrh, and that on one occasion he obtained relief from severe pain, his nostrils feeling almost closed. He rubbed his little finger in some honey before him, which was exuding from the comb, and applied it to the inner nostrils as an emollient or lubricator. Experiencing almost instantaneous relief, he continued to use honey freely for this purpose, until now he is almost entirely cured. Had he used boiled honey, he would probably have been but little, if any, benefited thereby; and had he used sugar syrup with bee-poison added, I presume it would have proved equally curative with the honey. The use of honey for catarrh is clearly suggested by the above extracts from Pliny and Butler.

Oxford, Ohio, March 10, 1871. L. L. LANGSTROTH.

* I much prefer this good old Anglo-Saxon term to *Apis mellifica*, the name given to it by the homœopaths, but which is the proper scientific name of the honey bee itself.

A process has been invented by which castor oil is made palatable, and can be eaten on bread like so much honey.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—If we were not afraid you might think Novice boisterous, we would like to sail our hat in the air, and hurrah for our success in wintering again, as our sixty-four are all right, safe and sound; nearly in the same condition as when they were put away last winter. Our better half suggests that if we could manage to sail that same old hat, having been pulled down so often for hybrids, to some inaccessible point, it would be another decided success.

You know, Mr. Editor, our former troubles in wintering, and how it was our main trouble; but with our bee-house we have now done it twice, *without any loss at all*. If those candidates for out-door wintering could go through the examination with us, see the hosts of live bees (the dwindling down after being taken out is all humbug; ours have been out two weeks now, and are working heavily in flour, and many of them would pass well for June) and brood in all stages, they would conclude that bees could raise all the brood in-doors that can by any possibility be required as early as this date, March 9th. We have just got about half through our examination of the hives; have found one queenless, or at least no queen turned up, and another with queen but no brood. But there were so many bees in both cases, that we gave them brood from other stocks that could well spare it, and have no fear that they will not be all right.

And now we must make a confession that reminds us painfully of being only a novice yet, after all; full of blunders as usual, and as it seems we shall always be. We found one queen with wings unclipt, which, you know, we never allow, and accordingly clipt one, and then set her on another frame from the one we removed her from, remarking, at the time, that she was treated much as if they (cross-hybrids) should sting her; but, as she was in her own hive, we shut it up and passed on. A few days later we found a dead queen in front of the same hive, and on opening found queen cells. We have heard of bees stinging their own queen before, but this is our first case of the kind. A fertile queen (March first) is worth, let us see, 100 lbs. of honey at least (the way we manage, remember), and the mortification, &c., 500 lbs. more. But let us try some other more pleasant theme.

W. D. Wright, Knowersville, N. Y., asks as follows:

"I have a wooden extractor, and although the wire cloth is but ten meshes to the inch, and the frames 10 by 14½ inches, when turned the wire cloth hollows so much that any new comb flies out of the frame immediately, all to pieces. Have you had any such experience, and do you know any remedy?"

Lots of experience. For remedy, keep the wire cloth up in its place some way. We have used several cross-bars of heavy wire, but a friend at the Convention gave us the best plan we have heard of, viz.: Take a strip of heavy

tin, half an inch wide, double it lengthways, and fasten it across back of the wire cloth, with the smooth edge against it, which will be stiffer than any wire.

"2d. How much space do you leave between the upper and lower set of frames, in the two-story hive?"

Not more than one inch, or the bees will build combs there. We never use a honey-board when the bees are at work above. If they raise brood there, all the better; then we have a side storing hive, ahead of Hazen's, Quinby's, Alley's, or any other, *in our opinion*.

"3d. What do you mean, in the last No., by leaving the hive open in summer?"

Just this: We remove all entrance blocks and back ventilator entirely; and we think all this room is needed for a thoroughfare for a two-story hive of Italians. As for too much ventilation: not at all for a heavy force of bees, and if they are not all such in June, it is your own fault.

"4th. Have you ever sent any honey to New York?"

No. We sold it all, or nearly all, readily in Cleveland.

We said, in our opinion, Mr. Langstroth's remarks were worth more than all else that was said on bees at the Convention. Several persons have asked for an explanation. What we meant is this: Mr. Langstroth, as we felt, was the only one almost whose remarks were up to the times. Community is, and always has been, almost twenty-five years behind him. His remarks on the melextractor were given with full consciousness of the place it is designed to take in future; yet none, or very few, bee-keepers seemed to be aware of this! How many bee-keepers will agree that extracted honey can be produced better for ten cents per pound, than box honey for fifty? Or, if they do, why do they stick to boxes for all the world as they stuck to old box-hives?

He was very meagerly reported, as was almost all of the Convention. Almost every prominent bee-keeper could have given, from memory, a much more valuable report. Many important matters were disposed of in three lines that really required forty, and in many instances, the three lines were all *bosh*. We were sorry to find many very important subjects omitted entirely. We could, with little trouble, point out these items, should any one care to have us do so.

Mr. Miller, of Peninsula, asks Novice five questions, page 207, which we answer all at once, by stating that the stock of bees that gave us the three tons and over of honey, last year, were raised entirely from one *twenty dollar* queen, purchased from Mr. Langstroth. As our object has been honey, and nothing but honey, we raised our queens precisely on the plan Mrs. Tupper gave before the Convention. (Reporter omitted it, of course, as it was of great value. What they did state was something that Mrs. Tupper did not say at all, and would not have said. See page 186.)

In regard to the difference in value of Italians and hybrids (we hope the lady will excuse us, if we do not get it exactly as she gave it), she

stated that if honey was the sole object, she would get a *pure* queen, imported, if necessary, to insure absolute purity, and then raise all queens from this one, paying no attention to what drones they met. In this way the bee-keeper would have but little trouble, and would be sure of having nothing worse than first-cross hybrids, which, all things considered, will produce as much or more honey than the pure ones. We gave substantially the same thing in the Journal some time ago, in answer to the statement, by an agricultural editor, that Italians were of no use unless kept on an island, &c.

We purchased one other queen of Mr. Langstroth, in the fall of 1869, but lost her before we had raised many queens; and last fall so many of our old queens failed that we purchased twenty-five of Mr. Grimm to replace them, not having time to raise others.

We have thought the cross-colonies most profitable, but find so many exceptions that we should not like to say so.

The lightest colored and most peaceable bees we ever had are from a queen now in her third summer, which laid so very few eggs that we have been obliged to assist her with brood; but kept her, because we could not think of killing a pretty queen. In fact, she was about as prolific as Grimes's hen, as the rhyme goes—

"Whoever stole our speckled hen,
Had better let her be;
She laid two eggs on every day,
And Sundays she laid three."

Well, as Mr. Langstroth said aptly, there are exceptions to all rules in bees, and, sure enough, yesterday we found our slow queen had filled her hive with bees, and has now nearly as much brood as any stock in our apiary. She is now entering upon her *third* season, remember.

On page 218 is another question for Novice. We can empty every comb in a two-story Langstroth hive in fifteen minutes, probably about twenty minutes on an average; that is, we have taken care of honey from thirty in a day. Honey will flow, without any trouble in warm weather, as soon in the morning as you can see, and even after dark or by moonlight.

We have just received a Peabody melextractor, and are much pleased with it; have no doubt it will answer every purpose. What revelations melextractors are destined to unfold to the bee-keepers of 1871, after honey boxes are among the things that were, is prominent in the dreams of

NOVICE.

[For the American Bee Journal.]

Unreliable Statements.

The novice in bee-keeping who reads attentively the periodicals and books on bees, for the purpose of learning *real facts* respecting the bee and the hive, must at times be sadly puzzled.

Extraordinary statements are so often made, in minute detail, having all the appearance of reality, and yet so contrary to all previous experience, that one hardly knows *what to believe*. It is a great pity that any one who really wishes to impart information on so important a subject, and where there are so many beginners, should

theorize, or guess, or imagine, and then make his statements as if they were real facts. There are articles constantly appearing in print, about which an intelligent bee-keeper *knows* that the writer has either been grossly deceived himself, or that he is deceiving others.

If such authors as Huish and Decouedie, &c., were now living, they would be heartily ashamed of their works,—so full of errors, and yet stated with so much confidence as to lead hundreds astray. Of course it is true that there is much relating to the bee which is not fully understood. It is one of the charms of bee-keeping that *there are mysteries*; and he who makes a real discovery will be a benefactor; but let their statements be well authenticated.

When a man, for instance, says that he "he took twelve queen cells and placed them in separate boxes, 3 by 2½ inches, with four to six drones in each, and in two days nine out of the twelve were fertilized," we have a statement which contradicts the experience of all other apirians. *It may be so*. It would save a world of trouble if it could be demonstrated beyond all doubt; but as long as there is a doubt, it is of no practical benefit in bee-keeping. There was a time when all the world, social, religious, and scientific, was wrong upon one point, and Galileo alone was right. So it may be now, in this case; but it is to be hoped that with the spread of bee-keeping, and with able periodicals, like the Journal, the time will come when all that is mere guesswork now will be so well established that a professed apirian would hardly be willing to make important assertions without very great care in giving all the facts, and those so well attested that, in the mouth of two or three witnesses, every word may be established.

Holmesburg, Pa.

D. C. MILLETT.

[For the American Bee Journal.]

Bees in Colorado.

MR. EDITOR:—In the February number of the Bee Journal, Mr. N. Cameron answers the question, asked in a former number, "Can Bees be kept in Colorado?" I was in Colorado in 1866, and had occasion to travel considerably through the months of July and August; and from what I could see, I made up my mind that Colorado was a No. 1 locality to keep bees in. The part that I was in mostly was in the vicinity of Denver. On a small creek ten miles north of Denver, I saw two stands of bees in the yard near a house. As these were the first I had seen in the Territory, my curiosity was at once aroused, and, hitching my donkeys to the fence, I struck for a look at the dear little pets. But, to my surprise and chagrin, I found them guarded by a faithful canine, who would not let me advance without a pitched battle; and as he was a rather rough looking fellow, I came to the conclusion that "discretion was the better part of valor," and retreated in good order. Still, not being willing to give up my object so easily, I boldly marched up to the door of the house (to which the faithful sentinel made no serious objection), and discovered that the family were

away from home; thus I had to give up my investigation. But I inquired of a neighbor about the bees, and this is what he told me: In the fall of 1865 he helped his neighbor to carry his bees into a shed, and it was as much as they could do to carry them. He had but one stock in the spring, and they had swarmed that year. They were in very large box hives, and from appearances were entirely neglected.

All along the creek bottoms, ditches, roadsides, and borders of fields, it was one endless sea of wild mustard and golden rod. From the mustard I have seen hanging large drops of nectar, which glistened like jewels in the morning sunbeams. On examination, I found this to be genuine nectar, though of rather a pungent, unpleasant flavor. There are also numerous patches of a small shrub that very much resembles the Red Root or Tea plant, so common in the western prairies. This comes into bloom about the first of August, and continues until frost. This shrub grows very thickly, and at times perfumes the air for half a mile around, very much like a field of buckwheat. I did not make a close examination, but should think that so fragrant a flower must contain honey.

At the base of the mountains there is a good supply of wild plums, mountain currants, etc. Honey was selling at \$1 per pound, and a miserable quality of strained hive honey, at that. When I left for the States, I did so with the full intention of returning and starting an apiary in Colorado. But circumstances have as yet prevented. If my conclusions are correct, that it is a good locality for bees, or if it is good enough that they can gather sufficient supplies for their own living, it would certainly be a very desirable place to raise Italian queens, as there would be no trouble to keep them from hybridizing.

Rockford, Iowa, March, 1871. E. BENJAMIN.

[For the American Bee Journal.]

A Season in New Jersey, No. 3.

The last of May had come. Letters had been pouring in for over three months inquiring for queens, in response to my advertisements. I had expected by that time to begin to have young fertile queens; but, instead, my hives were only thinly stocked with workers, from the causes before mentioned, and no drones or drone brood of much account. Evidently I was in a *fix*, and must get out of it. The matter was made as satisfactory as possible with customers, and I began to look around for bees to stock my nucleus boxes. I called upon three individuals in town, who together had eight swarms. The first "hated to part with them," and when I offered him more than he considered their worth, he seemed suspicious that I was going to make something out of them, and "thought they would be worth as much to him as to me." Finally, to get rid of me, not wishing to say "no," as he ought to have done, he referred me to his wife, saying that she watched them, and ought to say something about it. So he kept his bees, but he did not "hate to part with them" so bad, but that he could and did brimstone one swarm in the fall.

Number two was ditto. The next man who had five swarms, was an intelligent farmer in good circumstances. His bees seemed to be prosperous, and I really thought I should be able to procure some of him. In conversation, I learned that he had never sold any, but had given away one or two swarms. Finally, on being asked why he would not sell any, he replied—"Well, I suppose you know that all Jerseymen are superstitious in regard to selling bees." I did not know anything about it, of course. In fact, *all* Jerseymen, included many with whom neither he nor I was acquainted; and I presumed some of them might not be bound by such a heathenish superstition. Money is no object, when such a belief stands in the way. Reason is of no avail against it, as it stands outside the pale of reason. Here was the key to my ill success, thus far, in purchasing bees. These unfortunate people would have been unfortunate with their bees, as in their business or family affairs, and who could reasonably blame them for refusing admittance to such a dreadful omen of fate. I could not willingly consent to destroy their peace (or *piece*, if you please) of mind for a paltry swarm of bees. On decoration day I came across another Jerseyman having four hives of bees, one a new swarm of two weeks old. As he professed a desire to sell, I repaired to his place the next day, and had the satisfaction of learning that I could buy some of his bees for about three times their value. Before submitting to such extortion, I concluded to try once more, and took the train for a neighboring town, where I found a man of to-day, instead of an antediluvian, who had bees to sell.

I bought seven swarms of him, and took them home. His bees had robbed one another, until his swarms were considerably reduced in numbers, and what were left were mostly well stocked with bees and honey. They were in a protected situation, and flowers were plenty just then, clover was beginning to blossom, the bees of some colonies were working in boxes, and there seemed to be a good prospect for a prosperous season. I was to transfer the bees and return the hives.

For two or three weeks previously I had been overhauling my bees whenever it was convenient, as honey was plenty in the blossoms, and there were no robbers to cause trouble. Occasionally I had a few pieces of comb with a little honey in them, and I experienced some difficulty in having these pieces cleaned out. After getting my new treasures home, I commenced operations on them, expecting I could do most of my work out of doors, but "presto, change!" I found that "circumstances alter cases," and no sooner was a little honey exposed than all hands pitched in pell mell for it—hurrah boys!

Having seen such fellows before, I headed them off by transferring the combs in the cellar after drumming out the bees. Others may say what they choose, but I am convinced, and have been for years, that the black bees are far more troublesome by robbing than the Italians. They will follow it up all day, even if repulsed; while the Italians give it up at once, if repulsed at the beginning. But let the Italians get fairly started at robbing, and they will clean 'em out spry.

Part of those swarms were divided into nuclei, and part were put in hives stocked with empty combs, of which I had a large supply. There were some drones hatched, and the drone brood was given to the chickens. My drone catchers were adjusted as soon as possible to those hives containing black drones. This drone catcher is a small box which I designed for this purpose, and is arranged so that the drones and workers can go into it—the workers can go through or return, but the drones are caught sure if larger than workers. A part of the entrance is regulated so that only a worker can pass.

In my No. 2, March Bee Journal, page 203, second column, first line, read—"in eight or nine days the young native bees commenced working outside of the hive," &c.

I had observed, when I was first Italianizing my bees, several years ago, that the young Italians did not work outside of the hives until fourteen or sixteen days old. In this case the natives worked outside at half that age. I do not think it was because they were natives, but because there was such a mortality among the older bees that there were not enough remaining to supply the wants of the young brood. This would seem to indicate that the instincts of bees, as ordinarily developed, may be considerably varied in great emergencies.

All swarms, to work to the best advantage, should have a proper proportion of bees of all ages, and any system of artificial swarming which gives one swarm all the old bees, and another all the young ones, is wrong. J. L. HUBBARD.

Bricksburg, N. J., March 8, 1871.

[For the American Bee Journal.]

The Past Honey Season in West Tennessee.

MR. EDITOR:—The season of 1870 was the worst ever known for bees, in West Tennessee, at least that is the opinion of the "oldest inhabitant," and we think he is about right. We do not think there was an average of one swarm to the hundred colonies of bees in this section of the State, and not an ounce of honey was secured by the old fogies in bee-keeping, who amount to about nine hundred and ninety-nine in a thousand.

A few days of warm south wind, with occasional gusts as hot as if just from the Gulf of Mexico, brought out the red maple in full bloom, about the 5th of February. Then, for about five days, the bees revelled in a perfect wilderness of sweets; but, suddenly, on the 10th of that month, we had a terrible snow storm, with sleet and rain from the north. It was sad to see such destruction. For nearly three weeks we had bad weather continually, and if a bee so much as ventured to the entrance of her hive, she was met by a sputter of rain drops, and after hurriedly wiping it out of her eyes the little fellow was only too glad to be able to rejoin the warm cluster. A few warm days about this time brought the plum trees into bloom, but they were no sooner out than another cold snap killed them all.

The weather thus alternated all through March. A few warm days would bring out the remaining blossoms that had escaped from the last cold

spell, only to be killed by the succeeding one. April gave promise of better weather. The willows bloomed and yielded a considerable amount of honey. I had to empty some combs from my strongest stocks to give the queen room; and I had begun to expect to secure some apple blossom honey, when, to cap the climax of our apian woes, on the morning of Easter Sunday—the 17th of April, we looked out upon the fields and forests covered with snow. The blossoms of our great honey-producing tree, the poplar, were killed in the bud, together with the leaves—more than half grown on the trees. It took vegetation almost a month to recover from this shock, and when the blackberries bloomed they seemed to yield little or no honey, which was the case, also, with nearly all other flowers.

From gaining a bare subsistence, it seemed to be getting worse and worse with the bees, up to the 1st of June, when they, one and all, seemed to come to a solemn determination not to stir another inch, and resolved that they must either be fed or die. On opening a hive, the combs were found to be as dry as a chip. Not an egg, nor a particle of brood, nor a drop of honey was to be seen. I ought to have commenced feeding long before this, but had abandoned all expectation of increase, or of getting any honey until fall, and only wanted to interfere in time to save them. This I accomplished by feeding about two pounds of honey to the hive. After this matters began to improve, and continued to do so through the remainder of the season. By the middle of August I had all my colonies strong, with young Italian queens in all the hives, though these, unfortunately, were nearly all mated with black drones. About this time heartsease and two or three species of wild aster commenced to bloom, and yielded a good supply of very nice yellow honey. In a week or ten days after this, we examined our stocks, and found almost every comb in the body of the hives full of honey, with an inch or two along the top already capped over with the whitest of new wax. After having waited nearly the whole year, and seeing nothing but dry comb, it did us as much good to find our colonies in so good condition, as Henry Ward Beecher says, it does him to find a hen's nest full of eggs.

About the 20th of August the golden rod came into bloom, with a good many other fall flowers, and we had frequent occasion to use our melextractor. We got all our honey from the body of the hive. We use a two-story Langstroth. We failed to get any honey stored above, although we had a full set of empty combs there, with the honey-board left off. We got but little comb built, even in the body of the hive, the bees seeming to prefer even a vacuum to wasting honey, as scarce as it has been this season.

We commenced with fourteen colonies; bought four box hives, transferred them, doubled them, and closed the season with twenty-five strong colonies, with all worker comb in the brood department; besides two nucleus hives—one with four frames, and one with only one. All these have wintered safely out of doors, and are now doing well.

S. W. COLE.

Andrew Chapel, Tenn., Feb. 1, 1871.

[For the American Bee Journal.]

The Past Season.

The year which has just passed into eternity, is one which will be long remembered by bee-keepers, especially when placed in contrast with the preceding one, and we should be grateful to the Great Giver that He so ordained it. Had 1870 been as disastrous as 1869, the probability is that apiculture in North America would have received a blow from which it would not have recovered for a long series of years.

As you do not appear to have a correspondent in this locality, I will presume to inflict upon your numerous readers some of "my experience" during the past year. In the first place I succeeded in wintering my five stocks out of doors in the "Thomas Hive" splendidly. They required no feeding, although many persons in this Niagara peninsula lost all their bees by starvation. The fact of mine being *Italians*, and having plenty of upward ventilation, will, I think, account for my success. Well, about the first of March, I commenced stimulating (Gallup fashion), and kept it up until the 25th of April, when I concluded to devote two stocks to the collection of honey, and the remaining three to the increase of colonies. I prevented the honey stocks from swarming at all. *How?* I gave plenty of room by removing the surplus honey every few days, and removed ALL queen cells. I increased the other three to eighteen by artificial swarming. From one of the honey stocks I *abstracted* (Webster) two hundred and twenty-two (222) pounds of honey, of which one hundred and forty-two (142) pounds are down to the credit of Maj. Von Hruschka (is that right?)* the remaining eighty (80) pounds being stored in large boxes. From the other stock one hundred and seventy-six (176) pounds, making a total of three hundred and ninety-eight (398) pounds from the two—all of which I sold at the uniform price of twenty-five cents per pound. I find the extracted honey sells much more readily than that in the comb. I put it up in glass quart jars, and label them as per Novice.

My artificial swarms are all strong, and well supplied with honey, even after taking from them as much as the family required from time to time.

In order to prevent in-and-in breeding, I purchased Italian queens from different parties. The one purchased from a western man was a sad affair to me. She cost me nearly nine dollars, including postage (I expect she will cost still more,) and was superseded (nice word) very shortly after being introduced. Not only queens but workers reared from her eggs proved her to be impure, either in herself or in her fertilization (another nice word)—the workers being one-banded, and their royal sisters very dark.

This communication is becoming lengthy, but I must encroach on your patience a short time longer (that's Irish) in order to give "honor to whom honor is due." I next ordered a queen from H. Alley, Esq., of Wenham, (Mass.) I received the queen from him early in June. She

was a beauty, and her progeny are magnificent. I raised queens from her, and each was a duplicate of her mother. Being perfectly satisfied with Mr. Alley, I purchased five more in September, and am equally well pleased with them. The only fault to be found is they are somewhat slow in reaching purchasers. I would suggest to Mr. Alley to accept fewer orders and charge more. Finally (19thly) commend me to Alley's two dollar and a half queens every time.

O. FITZ WILKINS.

St. Catharines, Ontario, Jan. 12, 1871.

[For the American Bee Journal.]

Natural, Prolific, Hardy Queens.

THIRD REPLY.

Self-contradictions of Mr. John M. Price.

The artificial queens are good. "My experience is to increase from one to ten . . . Last year the ten swarms averaged thirty pounds each . . . To make my artificial swarms, two old stocks furnished brood enough to make one new one every week since the first of June."—J. M. P., in Amer. Bee Journal, September, 1868.

"I commenced with ten stocks, one being queenless, in April. I had at one time fifty swarms; all had fertile queens . . . Every swarm raised its own queen, with three or four exceptions . . . I made new swarms as long as I had combs to furnish them with . . . I started to make ten from one . . . Here is the result: an increase from nine to twenty-eight, with abundant stores to winter, and an increase of one hundred and sixty combs, each one foot square, an increase of 16½ frames for each old stock . . . I have not the least doubt that if I had let those hives that furnished the bees for my new swarms, furnish the brood, and let the others furnish the bees, the report would have been a great deal better . . . It will be seen from the above, that the result is satisfactory."—J. M. P., in A. B. J., January, 1869.

The artificially raised queens are not good. "Having tried and failed to secure either prolific or long-lived queens by the means mentioned by the authors."—J. M. P., in A. B. J., July, 1870.

"My experience in raising queens for the last five years, is, that I can raise twenty natural queens that will be equal to their mothers, to one artificial queen from the same mother, that will live until she is two months old, and be one-fourth to one-half as prolific as her mother."—J. M. P., in A. B. J., January, 1871.

He has experimented with his method several years. See above. "My experience in raising queens for the last five years," &c . . . "Having devised or invented, proved and tested, a means of getting natural queens started," &c.—A. B. J., July, 1870.

On the 13th of March, 1870, Mr. J. M. Price wanted to know a good way to get queen cells started. Up to June, 1870, he had not yet tested his method. "Having studied a plan and means of securing queen cells by a more natural way than those recommended usually, I am determined to put it in practice . . . If I don't succeed in

* Perfectly so.—Ed.

the way I propose, I thought I would exchange combs," &c. "If you have a way of providing queen cells, please give it through the Journal. I mean a way of getting the bees to start them in sufficient numbers." (March 13, 1870, illustrated B. J. for June.)

"I gave them queen cells and they hatched out a week ago You see my mode is not theory but facts" (June 20, A. B. J. for November, 1870.)

The artificial queens are cripples, drone-laying, &c.

"I am trying the experiment of raising forced queens from the brood of a pure Italian queen received last spring, but so far I have only succeeded in raising cripples, drone-laying and egg non-hatching queens."—A. B. J., November, 1870.

The naturally raised queens can also be cripples, drone-laying, &c.

"The 25th of June, the hive having twenty-three or twenty-five queen cells, the Italian queen led out a swarm Of these queen cells (raised under the swarming impulse) I secured seven queens. One was without wings, one became drone-laying, one laid eggs which would not hatch."—A. B. J., January, 1870.

The queen received from Ch. Dadant was not good, because she was artificially raised. "I have only one artificial queen laying: my pure, prolific Italian. I will guarantee any of my black, young or old, or other natural queens, to fill five frames with brood quicker than she can fill one."—A. B. J., November, 1870.

The queen received from Ch. Dadant was not good, because she was chilled on her journey. "I think the chilling she received on her transit from Hamilton, Illinois, to Winthrop, had a good deal to do with her unproductiveness."—A. B. J., January, 1871.

After copying the above quotations, I could leave the reader to draw the conclusion, but I desire to add a few remarks.

Mr. J. M. Price says that he has failed to raise good queens. True, he has never raised queens up to July, 1870, though he has made artificial swarms in the worst way possible; that is, spoiling his colonies by dividing them to the utmost (ten from one.) No wonder if he got so many worthless queens. No good queen breeder ever used so defective a method. He finds the queens started in good colonies better than those raised in his needy swarms, and he mistakes in guessing that his good success came from the swarming impulse, when, on the contrary, it came from the *milieu* in which the queens were started.

He proposes to give his method of artificial swarming; but we have already read his method three times in the A. B. J. for 1868, 1869 and 1870. Is it a new edition of the same, or a new method? If the latter, we may fear to get a mode not sufficiently experimented upon, for Mr. J. M. Price is very fast in drawing his conclusions. For instance, he received his first Italian queen in June, 1870, and three or four months after, he gives his opinion as to the prolificness of the Italians, although his queen had been impaired on her way to Winthrop.

That queen was raised in March-April, in a

strong stock found queenless. This colony, after having received a comb of brood, constructed six queen cells. All of these, but one, were introduced in black colonies, and her sisters proved to be as good as any.

On receiving the letter of Mr. John M. Price, asking for a pure, tested queen, I took special care to choose a good one, in order to satisfy him, and to prove to him that his ideas on artificial queens were mere conjectures. After opening five or six hives, the queen referred to was chosen, because she seemed the most prolific, having in forty days filled her hive with bees and brood. The queens raised from her brood, after her departure (her daughters,) proved to be hardy and prolific also.

Of course, I was greatly puzzled, when I received two letters from Mr. Price, saying that the queen sent was very unproductive, and attributing her unproductiveness to artificial raising. It is only in the A. B. Journal for January, that he has avowed the probable cause.

We Frenchmen are often charged with the defect of being very sanguine. I guess friend Price was as much, if not more sanguine than any true Frenchman, in drawing his conclusions. Moreover, we see that he is not very consistent, although he wrote somewhere: "Consistency, thou art a jewel." (Illustrated B. J., September, 1870.)

CH. DADANT.

Hamilton, Ill., Jan., 1871.

[For the American Bee Journal.]

Wintering Bees.

My communication of December 9th last, left my bees in their summer stands. The next morning found the temperature at 18° F., with indications that winter was upon us. We therefore gave our cellar full ventilation, lowered the temperature therein to 34°, and immediately proceeded to remove our bees thither. We closed the entrance, made all dark, and removed the caps from the hives, piling them (the caps) in one corner out of the way, leaving the hives open, with the very material exception that there was wire cloth thrown over the tops of the frames, and a newspaper spread lightly over the wire cloth on each hive. Friend Gallup says "great is humbug." So say we, but with the next breath we exclaim "very convenient is wire cloth."

We succeeded in keeping all things to our satisfaction for a long time, but when the coldest snaps were upon us, the temperature of the cellar would run down to 18° or 20°. The only consolation we had was, that even at these figures, it was much milder than on the outside.

The bees remained as quiet as could have been expected till February 16th, when hive No. 3 became noisy. We gave them more ventilation by removing the paper from the top. The next day No. 8 was in the same fix, and was treated in a similar manner. We had grave doubts as to the propriety of giving them so much cool air, but what else could have been done to keep them from worrying themselves to death.

Each day added to the number of malcontents, and the final result began to look quite problematical, when the morning of the 25th of February broke upon us with a south wind, and a thaw in progress. The necessary preparations were made, and as the mercury approached 60°, we removed our bees and placed them on their summer stands, with the entrances to the hives open. Many bees took advantage of their liberty, and of course a few were lost.

On a partial examination I found one hive contained many dead bees; another contained a few; the remaining fourteen appeared all right. The next day was unsuitable, but the second day after was mild and pleasant, and the little pets had a glorious time—music, music, all around!

I am not able to tell what the knowing ones will think of all this; but, for myself, I will say that as evening closed upon the scene, and the busy little fellows were hushed in rest, I felt that another crisis had been safely passed, and my apiary was worth many dollars more from the operation.

Soon after this we returned the hives to their old quarters, where they remained quiet, while the winter king made a vigorous effort to retain his icy sceptre and his snowy crown.

D. P. LANE.

Koshkonong, Wis., Feb. 27, 1871.

[For the American Bee Journal.]

Patent Hive Pedlers.

If there is any one thing more than another, in which the inexperienced are humbugged, it is in patent bee hives; and the humbug pedlers of these always give the practical bee-keeper and his neighborhood a wide berth. They usually choose some neighborhood where the old gum is almost the only hive in use. Consequently, the bee-keepers there are ignorant of what they do want; and usually, the operator is either himself ignorant of bee-keeping, or is a knave of the worst stripe (though we have seen some uniting both qualities). He has a model hive, finished in the finest style, with brass handles, brass hinges, and trimmings to match; and perhaps it is veneered and varnished in addition. The model is usually, in fact, a splendid ornament to look at; and (without any bees in it) works like a charm. "And then those movable frames," says the hive pedler; "you see, every bee-keeper wants them; no practical bee-keeper does without them. Why, man alive, you can treble the amount of profit at once, over and above the old gum. And then, see how easily you can take out honey at any time! All you have to do is to take out one of those frames of honey, and place it on the table for company, set an empty frame in its place, and the bees will immediately re-fill it. And in one of those hives, the bees will make honey, even in winter. Aye, and if you get the right kind of hive, the comb will even grow mushroom fashion, which you can readily see is a great advantage. Old foggy bee-keepers don't believe in this; but, then, they are much behind the times. Our hive demonstrates this to a dot."

"Well, Mr. P.," says the gaping greenhorn, "you do put forth some new ideas. I think I must have one of them patent skeps or gums. They are such nice things. How much do you ax for one?"

Pedler.—"Well, sir, you see we have been to a great expense in getting our patent, besides the loss of time in inventing the hive; and it is going to cost us considerable to introduce it to the public. But seeing it is you, and we want to get the hive introduced in your neighborhood, and we are aware that you are quite a prominent bee-keeper in these parts—" [Soft soap.]

"Oh, yes; we can have a swarm of bees equal to any man you ever saw. Do you see that tree there? Well, we have been up to the top of it, and brought down a limb with the bees settled on it, and put them in the hive, and didn't get stung a bit. What do you think of that?"

"Well, sir; you are a bee-keeper, and no mistake. [Soft soap again.] But, as we said before, you are a prominent bee-keeper, and we will sell you the right, and a pattern hive, and transfer a swarm of bees into it, for fifteen dollars."

"Whew! I reckon, stranger; you're pretty steep, ain't you? What was that you said about putting bees into it? My stars, the pesky critters will sting you to death, I reckon."

"Oh no sir; we will fix them so they won't sting, and give you the secret for nothing, seeing it's you. Then you can transfer all your bees into those splendid hives, as soon as you can get enough made—combs, bees, and all; although the comb is not worth much, seeing it will grow in my hive."

"Well, stranger, I think I will take one of the patent gums; but don't let on to my old woman, 'cause she'd be as mad as a March hare, if she finds out how much the pesky thing cost."

The deed is made out, and all things are satisfactory. The swarm of bees is installed in the new hive, (in a bungling manner, as usual,) and Mr. Humbug departs chuckling, ready to cheat the next greenhorn he comes across, out of twelve or fifteen dollars.

In a few days after, along comes the owner of Langstroth territory, or his agent. He calls on our friend, the greenhorn, and the conversation soon turns on the bee or hive question.

"Look here, stranger," says greenhorn, "I've got the nicest gum here you ever did see. I bought it a few days ago from Mr. H. Maybe you've come across him somewhere in your travels. Mighty nice man, I reckon."

"Why, that, sir, is a Langstroth hive, with useless additions and clap-trap fixings."

"A what, did you say?"

"A Langstroth hive! Did he give you a deed to the right, &c.? Let me see it." (The deed is brought out.) "Here, you see, this deed gives you the right to use Mr. H.'s improvement to the movable comb hive (and nine out of ten of those so-called improvements are retrograde improvements), but he has not deeded to you the right to the movable frames, at all. Now, sir, you must pay me ten dollars for the right, or I shall prosecute you for infringing on Mr. Langstroth's rights."

"Thunder! You don't say so, do you? Why didn't the pesky fellow tell me of this, and then I could have bought of you in the first place."

Now, Mr. Greenhorn, there is no use in mincing the matter. In the first place, be sure to ascertain whether you are purchasing an improvement, or the genuine article itself. In the second place, ascertain whether the so-called improvement is worth anything to you, or not. The patent hive man never takes the trouble to inform you that Mr. Langstroth was the original inventor and patentee of the movable comb hive; but usually impresses the idea that the hive he offers, movable combs and all, was invented by himself. Take my advice. It costs you nothing. Remember, the form of the hive is not patented or patentable. All manner of forms of hive were used before the movable comb hives were thought of. It is my candid opinion, that but very few of the hundreds of hives patented are any improvement on the Langstroth movable combs; and ninety-nine out of every hundred are entirely worthless, when compared with the Langstroth hive. We will take one for example. It has a slanting bottom board, movable combs, &c. But the patented features claimed are slides to cut off the communication to the boxes; and the hive could be separated in the middle into two half hives, and an empty half attached to each full half. This, you will readily see, was doing away with the movable combs to a certain extent; and you will as readily see that the patented features are entirely worthless, while the movable comb feature, which is what sells the hive, belongs to Mr. Langstroth.

ELISHA GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

Pain d'Epices Francois.

(French Gingerbread.)

In order to comply with the desire of my friend Duffeler, I give hereinafter a recipe for the French pain d'epices.


Dissolve half an ounce of soda in half a pint of milk. On the following day mix up that soda with four pounds of flour, and add enough honey to make a dough a little mellow. Add to this paste one dram of anise, as much coriander, and four grains cloves, all well powdered. Knead that dough the same as for bread, with great care, so as to mix up all the ingredients; let it stand two hours; then bake it in a slow oven, as for biscuits. From ten to twelve minutes are sufficient, if the dough is thin; it requires somewhat more time if it is thick. Before putting it in oven, you can ornament it with almonds, and some slices of sugar-pickled lemons embedded in the dough, or some *non-pareille* boiled with beaten eggs.

Nearly all the honey of Brittany (buckwheat honey) is used to make such pain d'epices. Sometimes molasses or sugar is substituted for honey. Rye flour is generally preferred; the pain d'epices is then more brown, but more savory, than when wheat flour is used.

Croquets.

The confectioners of Dijon and Rheims, whose agents travel all over France, to sell their products at the fairs, make another sort of pain d'epices, named *croquets*.

It is the same dough kneaded with half honey and half sugar, and wheat flour.

That dough is spread or rolled only one-fourth of an inch thick, and is cut with a cutting punch nearly resembling a glove () with only two fingers. It is then put in the oven to be dried, rather than to be baked. The honey being very apt to absorb moisture from the atmosphere, the croquets, in order to deserve their name (*croquer*, in French, means to *craunch*), are dried anew before eating.

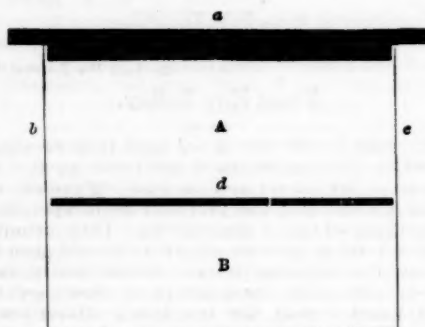
In France, every country family, in easy circumstances, buys at the fairs a supply of these delicacies sufficient for several weeks.

CH. DADANT.

Hamilton, Ills.

[For the American Bee Journal.]

A New Bee Feeder.



MR. EDITOR:—I wish to describe a bee feeder which appears to me to be better fitted than any I have yet seen for use, when bees are in winter quarters.

In one of your comb frames nail a half inch strip lengthwise between the side pieces, so as to divide the frame into two parts, an upper *A* and a lower *B*. Then take a piece of coarse muslin or cotton cloth, and tuck it, at its edges, on one side of the upper division of the frame, drawing it quite tight, and holding it in place by thin strips stacked over the edges at the sides and bottom, *a, b, c, d*. Now, reversing the frame, attach another piece of cotton cloth, in like manner to the opposite side of the upper division. Fit a piece of empty comb securely in the lower division *B* of the frame, and bore a hole through the top bar, to receive a funnel, through which the feed can be passed into the feeder, as required. Now place this frame feeder centrally in your hive, or where the bees are clustered, and they then have their feed just where they want it, as though it had been stored in the combs. A hole should be bored in the honey-board, to correspond with that in the top bar of the frame,

in which the funnel may be inserted, and which may be closed with a cork, when not in use.

In the Northern States, bees ill supplied with stores, should be fully fed in the latter part of September or the beginning of October; but this feeder answers admirably when cold weather comes on, before they have obtained sufficient supplies. Last fall I put a colony into a hive with only empty combs, and by using this feeder they are now in good condition, and *do not remove the honey faster than they consume it*, as they know that they can get it as readily as though they had themselves stored it in the combs, above the cluster. When you get through with feeding, pour warm water in the feeder, rinse it well, and let it dry.

Mr. Editor, I have now fully described what I know from experience is an excellent feeder, and thus make it public—desiring at the same time to receive due credit for my invention.

J. F. HERSHEY.

Mountjoy, Pa., Jan. 12, 1871.

[For the American Bee Journal.]

How I Lost a Number of Queens.

About the beginning of the month of June last, I had a large number of nice prolific Italian queens, and only a small number of orders to fill. I therefore concluded to use them in making artificial swarms. In my southern apiary I had a number of hybrid colonies in very good condition. These stocks I concluded to use in getting up strong artificial stocks. My mode of doing this was as follows: I took from movable comb hives all the combs but two, without any bees, put them into an empty hive, and placed the latter on the stand of one of those box hives. All the old worker bees out in the field, and a large number that left the hives, afterwards, went into this hive, and a good colony would doubtless have been created if I could have induced the bees to accept one of those fertile queens in a short time. In the evening I introduced caged queens into nineteen colonies so formed, liberating them at evening on the third day, with every appearance of acceptance. To my utter surprise, however, on examination a week later, I found that eleven out of the nineteen queens were either killed or had swarmed out with a small body of adherents. Two of the remaining eight were still held prisoners by the workers. After destroying all the sealed queen cells, I liberated those queens and they were accepted.

I report this failure to the Journal to make others cautious in liberating queens in artificial colonies so formed. In former days, I proceeded as follows, when forming artificial colonies with surplus fertile queens. I divided a strong stock, by taking two-thirds of all the brood combs, with the adhering bees—putting them into an empty hive. I then removed the so-created colony to a new location and introduced a caged fertile queen in the evening, and liberated her on the evening of the third day. I scarcely ever

failed in having my queens accepted, and always succeeded in creating a good colony.

A. GRIMM.

Jefferson, Wis., Jan., 1871.

[For the American Bee Journal.]

Note from a Lady Beginner.

DEAR BEE JOURNAL:—Please don't think us presuming upon our short acquaintance—only six months—for truly we greet your coming with ever increasing interest, inspired the while with increasing thirst for knowledge in our chosen profession, we hope to be "admitted" some day.

We do wish though, that Mr. "Novice" would please change his name, or rather take one to which he has a better claim, say, "Blessed Experience," and let us have his; only we should want a prefix, like "very anxious," or something else that would express half the desire we feel to know just the right time to do the right thing for our bees.

With only four stands of bees, and less than one year's experience, we are able to promise that with *half* the success that others report, we will become just as much of an enthusiast. February 22 we found the bees carrying pollen, but could not tell whether from the field or some old comb stored in an outhouse. But, to-day, March 5, they are bringing such bright yellow loads, and come in such numbers, that we must open wide their doors.

The Red Elm is in bloom, and the bees make music to our ears, among the branches, bringing the hope that the coming season here may not be like unto the last in the lack of honey.

SUE W.

Pacific, Mo.

[For the American Bee Journal.]

Report from Dayton, Ohio.

I put up last summer about 500 pounds extracted honey in glass jars, heating and skimming it first. None of it had candied in the least, though upon noticing the fact that much of that in other hands *had* candied, I exposed some *out doors* to all the cold we have had since February 1st, and it has not changed, but is now bright and limpid as when first put up.

Last season was hardly an average one here, in yield of honey. We had good weather to near the middle of July, and the bees worked steadily, filling up empty combs, but made very little new, and did not swarm. Our fall pasturage, of golden rod principally, and a few other honey-yielding flowers, never amounts to anything more than, at the best, to keep up the strength of the hives. Comparative y no buckwheat is planted in this vicinity, so that our honey is obtained from fruit trees and raspberry blossoms, white and sometimes red clover, locust, and lime or basswood trees.

The melextractor will doubtless largely increase the yield of honey, and in seasons like our last summer be very advantageous; but bee-

keepers living in the vicinity of cities and a market, can sell honey in new white comb, in one or two pound boxes, more readily at fifty cents per pound, than the extracted honey in jars of the same capacity, at twenty-five cents per pound.

The surplus honey we get here up to August is far superior to the fall made honey of North Western Indiana, to which I have seen a good deal, and, I infer, to that of any part of the Western Prairie country. J. H. PIERCE.

Dayton, Ohio, March 9, 1871.

[For the American Bee Journal.]

Facts and Fancies.

DEAR JOURNAL:—I have read you with interest and profit ever since the second year of your existence, and have only once occupied your columns. In the meantime, you have grown so plethoric, and provender has become so abundant, that you can afford to be a little choice as to what you take into your capacious maw. Right glad am I of it; because you have swallowed without a grimace many an undigested and undigestible morsel. I will add my measure to the pile from which you feed.

FACTS.—Six years ago I got Langstroth's book, and studied it until I had it by heart. I then bought a hive of bees and set to work. I was successful, and soon became the wisest bee-man living, always excepting our author. I could have discoursed for days, filled columns of the Journal, or written a book on bee-keeping. Who could not, after reading Langstroth? Afterwards I got Quinby's *Mysteries* and King's *Bee-keeper*, if that is the right name. Quinby's book was evidently original, and it would have been good if we had had no better. It demonstrated this, that there never was a hive to equal the common box of the Quinby pattern. It was in midnight darkness about movable comb hives and the modern improvements in bee-keeping. As to all the other books I have seen, I would not like to say that every important idea was not taken from Langstroth. Facts may have a moral, as well as fiction. Let us see.

MORAL 1ST.—Let not those who are learning the A, B, C of bee-keeping be too impatient to rush into print and spread themselves before the world. If they go on towards perfection, as I hope they will, they will not feel half so wise in a few years. Novice says he is still Novice, and I fancy he is a good deal more humble yet wiser man, than when he first began. Bee-keeping, like religion, sobers with age. *Query*.—If Langstroth was credited with all the information received, directly or indirectly, from him, and which is spread out in bee books and journals, how much that is valuable would be left to be distributed among others?

MORAL 2D.—"Give tribute to whom tribute, honor to whom honor is due." If you think you are not indebted to Langstroth, give up every form of movable comb hives, and go back to the old box.

FACTS.—About a month before the swarming season, I noticed that one of my queens had gone to the opposite side of the hive from the

brood, and filled all the drone comb there was with eggs. To do this she had to pass empty worker combs. There were no eggs deposited in that part of the hive except in the drone comb, which was filled on both sides.

INFERENCE 1ST.—The queen can distinguish between worker and drone comb. 2D. When the queen lays drone eggs, she does it on purpose. The abdomen compression theory is not correct.*

FACTS.—Last summer I found two young Italian queens in one hive. Took one out, and left one.—the most beautiful I ever saw. In a few weeks I found about an equal number of most beautiful Italian and common black workers. Mortified that my fair young queen should have anything to do with contraband drones, I killed her; and then I afterwards learned that there was a black queen in the hive, which must have come from some of my neighbors a mile or more distant. Alas! I had in a rash moment killed the finest Italian queen I had ever raised, and on a groundless suspicion.

MORAL.—Don't take things for granted! Bee-keepers, especially the kind that get up new hives, draw some sash conclusions. Always "be sure you are right, then go ahead!"

FACTS.—Having received the right to make and use the Jasper Hazen hive, I made an experiment; but did not make his hive. I took all of the combs from one of my strongest colonies in May, and added two combs from another hive. I suspended six of these combs side by side, and right over them I suspended the other six. This made a tall, narrow hive. I built upon both sides and over the top with surplus honey boxes. I turned in all the bees, and kept them from swarming. I wanted to get all the boxes, which would hold 175 lbs., filled with honey. The plan was for the bees to commence in the side boxes and deposit the honey just beside the brood. But some bees have no sense. These persisted in climbing away through two sets of combs and putting the honey in the boxes over the top of the hive, where it could be of no earthly use to them in the winter. After these boxes were filled and the honey sealed, they were compelled to go into the side boxes; but they seemed to be in the sulks about it, and did not half work until I lifted some empty boxes on the top of the hive.

MORAL 1ST.—Don't take everything as gospel that is said about side boxes.

MORAL 2D.—Before you get too many of these hives, find out whether you have the side-box breed of bees. I haven't. JOHN.

* The "abdomen compression" theory may not be correct, yet it strikes us that the fact that the queen, passing over worker combs, laid *drone eggs* in *drone cells*, does not prove its fallacy. It shows only what has long been known, that she can distinguish the different kinds of cells.—Ed.

At a California fair recently, several bottles of strained honey were put on exhibition, when a chap put a bottle of castor oil with the rest. The opinion of all who tried it was that the bee that laid it was a fraud.

THE AMERICAN BEE JOURNAL. Washington, April, 1871.

☞ We consider the Bee-feeder, invented by Mr. Hershey, of Mountjoy, (Pa.,) and described by him, in the present number of the Journal, as the best device for the purpose intended that has ever come under our notice. The Germans use an ordinary feeding trough, with float, placed within the frame, and inserted in the cluster of bees; but the substitution for it, of what is virtually a feeding sac, is certainly a very valuable improvement and decided advance.

The apparatus, to which we alluded in our February number, for safely introducing queens, without seeking for and removing the old one to be superseded, or a fertile worker to be supplanted, is called the *QUEEN'S CASTLE*, and consists of a plain case adapted, in its dimensions, to receive a full sized frame, such as the bee-keeper ordinarily uses in his hives. The two sides of this case are formed of wire cloth, and the ends and bottoms are pieces of tin two inches broad, so as to allow a space half an inch wide between the wire cloth and each side of the comb or frame, which is to be suspended in the case. The case, too, should be a quarter of an inch deeper than the frame, so as to allow a free passage for the bees below the latter, and just long enough to permit the frame to be inserted in it easily. The tin end pieces should also project about half an inch at top, beyond the wire cloth, and be there bent outward, at right angles, to rest on the rebates of the hive, to support the case and its contents. An inch hole should be punched centrally through the tin bottom, and provided with a sliding cover for occasional use.

To introduce a queen in a colony, a frame containing worker comb with some sealed honey is to be selected, the queen and her companions placed thereon, the frame suspended in the case or queen castle, and the top opening closed with a strip of thin board, secured so as to confine the queen and bees. The case so arranged is then suspended between two brood combs in the hive destined to receive the queen, and allowed to remain there two or three days undisturbed. It is then withdrawn, the frame and comb, with the queen and her companions, lifted out and at once replaced in the hive; all the frames are then again properly adjusted and the hive closed. This completes the operation, and it is alleged, that queens so introduced are invariably accepted—the old queen of the colony, or any usurping fertile worker present being meanwhile discarded, deposed, and ejected.

The inventor of this apparatus and process, the Rev. Mr. Baist, of Ulfa, in the Dutchy of Hesse, says, that of a lot of twenty queens thus introduced at one

time, all were accepted, though several of the colonies contained fertile workers, and from six the old queens had not been removed. Nor has he known a single failure since the process was adopted, now more than two years ago. The queens usually continue laying eggs as if nothing had occurred to alarm or discourage them.

This process could easily be tested with queens of no special value, and we shall be pleased to hear the results of any experiments that may be made.

We call attention to the important suggestions made by Mr. Langstroth, in an article on the subject of bee poison, in this number of the Journal. He also related to us, lately, an instance in which a visitor to his apiary, who tasted freely of the just emptied honey (though strongly cautioned against it), and before he reached his home was seized with such distressing symptoms that his life was for some time considered in danger. Mr. Langstroth never offers the "*Hruschkaed*" honey for sale till he has, by sufficient heat, expelled all the bee poison. He uses for this purpose the tin receiver in the rear of the Stewart cooking stove, in which he keeps, on the wire racks, two large, deep pans with proper faucets. These will properly heat (and when needed thicken) a large quantity of honey, while the ordinary cooking for the family is being done. At other times the bottom of the large oven and the top of the stove can be covered with additional pans. *The perfect control of the draft*, which is given by this admirable stove, (the inventor of which has truly been a benefactor to his race,) enables the bee-keepers to heat a large quantity of honey with the smallest expense of wood or coal.

Those of our readers who can refer to what is said in the Journal for February and March, 1870, respecting the Clark patent on the triangular comb guide, need not be told that the said patent has no validity whatever, and that any attempt by any one to sell rights under it, or to collect damages for infringements on it, is a *clear fraud on the public*. To those who have not access to those numbers of the Journal, we would say, that the records of the Patent Office show that Clark's application for a patent was not made until more than *two years after* Mr. Langstroth had made, used, and extensively sold said guides in his hive, and under those circumstances no valid patent could be obtained.

We publish in this number of the Journal a series of papers relating to patented (?) methods of feeding hogs; and do so for the purpose of conveying to inventors and others a clear idea of the formal manner of transacting business in the Patent Office, and also to enlighten the public to some extent, in regard to the worthlessness of many patents actually issued by the office.

The mere issuance of a patent is no evidence of practical value, nor does it establish the fact that the owner thereof has a right to use all the features that are described and illustrated therein. It is often the case that all the valuable features in a patent are fully covered by previous patents, so that the owner of the subsequent patent has no right whatever to use the invention which he illustrates without license from the owners of the patents which antedate his. It is a difficult matter to impress these facts upon the public by simple statements, and consequently cases are constantly occurring where innocent parties have purchased patents supposed to cover valuable ground, which are not worth the paper they are printed on. To undertake to expose, by sober argument, the wily trickery by which artful schemers contrive to swindle the unsuspecting, would possibly be a fruitless and thankless labor; yet, happily, sometimes by fun and broad satire a truth is easily and firmly impressed upon the mind. If any of our readers are saved from imposition by the genial humor of the papers to which we refer, or should chance to agglomerate adipose matter by excessive laughter in the perusal, the object for which they were prepared by their author, will be fully attained.

THE ART AND MYSTERY

Of Patenting New and Useful Inventions,
EXEMPLIFIED AND ILLUSTRATED

By H. W. BEADLE & Co.,

Solicitors of Patents, Washington, D. C.

Patent of John Jones.

JOHN JONES.

Letters-Patent, No. 16, 789, 391, February 31st, 1858.

IMPROVED METHOD OF FEEDING HOGS.

To all whom it may concern:

Be it known that I, John Jones, of Jonestown, in the County of Jones, and State of Indiana, have invented a new and improved Method of Feeding Hogs, and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention consists broadly in the employment of the force of gravitation in combination with a hog's esophagus, or its equivalent, for the purpose of retarding the movement of food from the face opening to the muscular membranous reservoir, by which means all nutritious qualities are thoroughly extracted.

To enable others skilled in the art to which my invention appertains, to use the same, I will now proceed to describe fully my improved method, with the appliances for carrying it into effect.

Hogs, like other mammals, ordinarily eat too rapidly, and thus fail to derive that benefit from their food, that they would receive, if time should be taken to properly masticate and digest it.

By means of my invention, however, all opportunity for rapid eating is taken away, as every particle of matter taken into the face opening must be swal-

lowed in opposition to the force of gravitation. The method of carrying my invention into effect is substantially as follows:

The relative position of the hog's body is changed during the time of feeding by any suitable means. I preferably sink the trough below the surface of the ground in such a manner that the hog is obliged to depress his anterior portion before he can partake of his food.

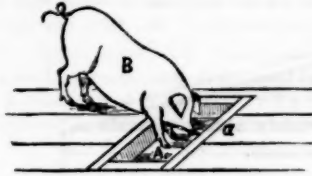


Fig. 7.—John Jones, Feb. 31, 1858.

B represents a hog of any proper construction, the internal organs being preferably arranged as usual. A represents the trough, the bottom of which is depressed beneath the level of the floor a as shown.

The operation will be easily understood, by an inspection of the drawing.

In practice, it makes no difference, whether the anterior portion of the body is depressed, or the posterior elevated. The result is similar in either case.

I do not limit myself to anything in particular, but desire to claim everything in general.

Having thus fully described my invention, what I claim as new, and desire to secure by letters patent is,

1st. The force of gravitation in combination with a hog's esophagus, or its equivalent, as described.

2d. A hog in combination with the floor of the pen, when arranged relatively at any suitable incline therefrom, substantially as described.

3d. A hog anteriorly depressed, or posteriorly elevated, or both, or its equivalent, substantially as described.

Inventor,

JOHN JONES.

Witnesses:

ANDREW ASPUR,
BARNARD BAKELY.

APPLICATION OF JOHN SMITH.

PETITION.

To the Commissioner of Patents:

The petition of John Smith, of Smithtown, in the county of Winnebago, and State of Illinois,

RESPECTFULLY REPRESENTS, That your petitioner has invented a new and improved METHOD OF FEEDING HOGS, which he verily believes has not been known or used prior to the invention thereof by your petitioner. He therefore prays that Letters Patent of the United States may be granted to him therefor, vesting in him and his legal representatives the exclusive right to the same, upon the terms and conditions expressed in the Act of Congress in that case made and provided; he having paid Fifteen Dollars into the Treasury, and otherwise complied with the requirements of said Act. And he hereby authorizes Hugh W. Beadle, of Washington, D. C., or his associate, to act as his attorney in presenting the application, and in making all such alterations and amendments as may be required.

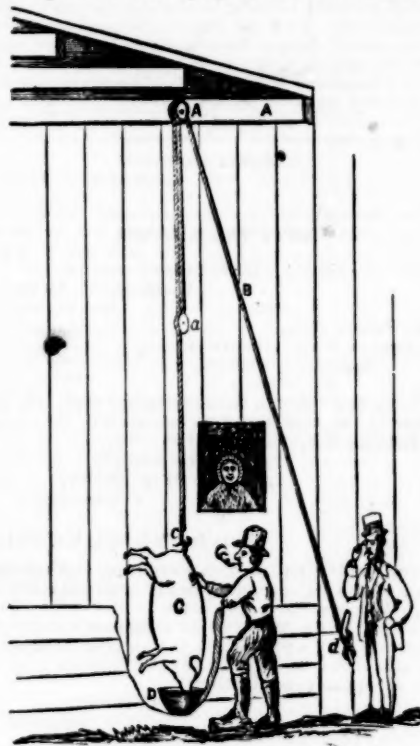
JOHN SMITH.

SPECIFICATION.

To all whom it may concern: Be it known, that I, John Smith, of Smithtown, in the county of Winne-

bago, and State of Illinois, have invented a new and improved METHOD OF FEEDING HOGS, and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention relates to an improved method of feeding swine and other pachydermata, and consists mainly in so suspending the animal to be fed, that the sustenance which it takes is compelled to ascend in an upward direction, by which means the latter



JOHN SMITH'S METHOD OF FEEDING PIGS.—Fig. 1.

becomes thoroughly digested, and thus imparts all its nutritious qualities to the animal, as will be fully described hereinafter. In the drawings—

Fig. 1 represent a simple arrangement of pulleys and rope attached to a dwelling, for the purpose of elevating swine for feeding according to my improved method—a portion of the side of the pig apartment being broken away, in order to give a full view of the suspended animal.

Fig. 2 represents a modification of the above arrangement.

Figs. 3 and 4 represent views of parts detached.

Fig. 5 represents an animal fattened in the ordinary manner.

Fig. 6 represents one fattened by my improved method of feeding.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe fully my improved method, with the appliances for carrying it into effect.

It is a well-known fact that indigestion, with all its attendant horrors, is almost invariably produced by a habit of bolting the food while eating, without masticating it. It is believed that this dreadful disease is

not confined to bipeds alone, but that quadrupeds, especially those of the pachydermata order, are also more or less affected in this way from a similar cause. Were the inconveniences and annoyances to which the animal is subjected when thus afflicted the only result produced, the want of a remedy would never have been felt, but when it is known that such a condition is most unfavorable, if not absolutely fatal, to the agglomeration of adipose matter, the value of this invention will be at once perceived.

The design of this invention then is to cause the food taken by the animal to pass slowly through the intestines, in order that its nutritious qualities may all be thoroughly extracted during its passage. Swine usually take their nourishment with their fore limbs placed in the food receptacle. In this position it will be at once perceived that the body is inclined in a downward direction from front to rear, and the nourishment taken naturally flows rapidly, by the force of gravitation, into the stomach, without giving out

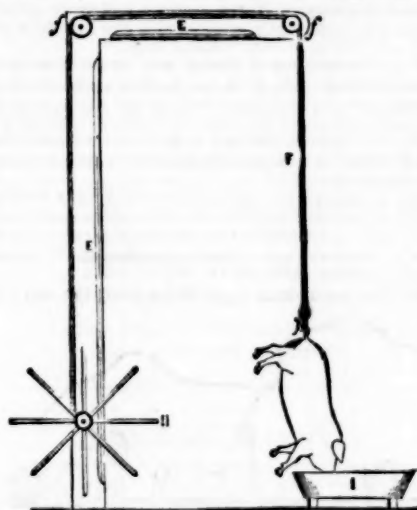


Fig. 2.

nourishment upon the way. Further the fore feet of the animal become immersed in the food, which adheres thereto, and is lost, no nutriment being absorbed through the feet.

In fig. 1, A represents a pulley securely attached to beam A. B represents a rope of suitable strength, which passing over fixed pulley A and through loose pulley a, is securely attached at one end to the hog's tail c, (which latter is rigidly secured to the body C,) and at the other, when the animal is suspended, to the cleat d.

If the animal is of the curly-tailed breed, it will be sufficient simply to hook into a curl of the tail, as is shown in fig. 4, but if straight-tailed, it will be necessary to effect a union by tying, as shown in figs. 1 and 3. D represents a patent trough. In the modified arrangement, as shown in fig. 2, E represents a standard provided with the arm E'. F represents a rope passing over pulleys f, f, to windlass H. I represents a trough of ordinary construction. It will be observed that in fig. 1 the animal is shown in combination with a patented trough, and in fig. 2 with a trough of the ordinary construction. The result in either

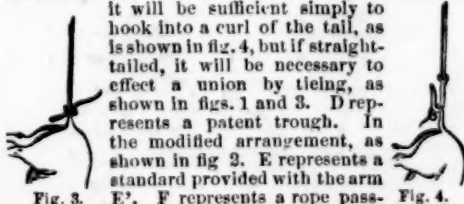


Fig. 3.

Fig. 4.

Fig. 5: A diagram showing a pig standing on the ground, representing an animal fattened in the ordinary manner. The pig is labeled 'C' and the ground is labeled 'D'.

Fig. 6: A diagram showing a pig standing on the ground, representing an animal fattened by the improved method of feeding. The pig is labeled 'C' and the ground is labeled 'D'.

combination is equally good. It should be here stated, that by my improved process and devices, indigestion in hogs is prevented in another way. This disease arises mainly from over-eating, but a hog suspended as shown, will find, as the weight of the food is added to his own weight and all suspended from the tail, that his position will become somewhat painful, and he will be disposed to cease eating before he has quite surfeited himself, which is in exact accordance with strict hygienic precepts. Moreover, it is more cleanly, as no hog can "slobber" in this position.

The beneficial results produced by this improved method are shown in Figs. 5 and 6; the former represents an animal fattened in the ordinary manner, and the latter, one fattened by my improved method. A great difference will readily be observed. I generally prefer to use liquid nourishment in feeding by my method, but solid food can be used if desired, without departing from the spirit of my invention. It is therefore obvious that any one provided with my improved apparatus, if the pulleys and their attachments are sufficiently strong, and the tail does not pull out, will be able to "Raise Hogs."

I am aware that a patent was granted to John Jones, February 31, 1858, for feeding swine in an inclined position, and therefore I do not claim broadly all hogs, *per se*, or the idea of feeding hogs, or the process of mastication and digestion, all these being old, but what I do claim, and desire to secure by Letters Patent is:

1st. A pachyderm, when suspended in a vertical position, substantially as and for the purposes set forth.

2d. The pachyderm's tail *c* in combination with the rope B, whether tied or hooked, substantially as and for the purpose set forth.

5d. The pachyderm C, provided with the tail *c* at-



Fig. 5.

tached as shown, in combination with rope B, pulleys A, *a*, beam A' and cleat *d*, as and for the purpose described.

4th. The pachyderm C in combination with the trough D, as shown and described.

5th. The pachyderm C in combination with the trough I, as shown and described.

6th. I claim also, as the product of my improved



Fig. 6.

method, the pachyderm X, as shown in Fig. 6.

This Specification, signed and witnessed this 31st day of April, 1868.

Inventor, JOHN SMITH.

Witnesses:

ANDREW AMINGTON,
BURTON BAKER.

STATE OF ILLINOIS, }
COUNTY OF WINNEBAGO, } ss.:

On the 31st day of April, 1868, before the subscriber, a Justice of the Peace in and for said County, personally appeared the within named John Smith, and made solemn oath that he verily believes himself to be the original and first inventor of the within described Improved Method of Feeding Hogs, and that he does not know or believe that the same was ever before known or used, and that he is a citizen of the United States.

HENRY HOWARD,
Justice of the Peace.

OFFICIAL LETTER.

U. S. PATENT OFFICE,
WASHINGTON, D. C.
June 31, 1868.

JOHN SMITH, ESQ.,
Care of H. W. BEADLE & CO.,
Solicitors of Patents,
Washington, D. C.

Please find below a communication from *The Examiner* in the matter of your application for patent for Feeding Hogs, filed May 32d, 1868.

Very respectfully,
BENJ. BROWN,
Commissioner,

Examiner's Room, No. 2114.

Your application has been examined, and the first clause of the claim found wanting in patentable novelty. A substantial anticipation is shown in a hog suspended by his hind feet in a butcher's stall, for this is certainly a pachyderm in a vertical position.

If this clause is erased, the other clauses may receive favorable consideration.

A. CAPTIOUS,
Examiner.

AMENDMENT IN THE MATTER OF JOHN SMITH'S APPLICATION FOR PATENT.

To the Commissioner of Patents:

SIR:—In the matter of my application for patent for "Improved Method of Feeding Hogs," filed May 32d, 1868, I hereby amend by erasing the first claim in the specification and by changing the remaining numerals accordingly. This amendment is made in accordance with the suggestions contained in Office letter of June 31st, 1868. It is believed, however, that the original first claim was not met by the reference. Although "a hog suspended by his hind feet in a butcher's stall" is undoubtedly a pachyderm in a vertical position, it is affirmed that it is not suspended "as" (by the tail) nor "for the purpose" (feeding) described. It therefore cannot be deemed an appropriate reference to the claim.

In order, however, that there may be no delay in granting the patent, the claim in question is stricken out, and a speedy action requested.

Respectfully,
JOHN SMITH.

By Att'ys, H. W. BEADLE & CO.
Patent issued July 33, 1868.

APPLICATION OF JONATHAN SMITH, JR.

PETITION.

To the Commissioner of Patents:

The petition of Jonathan Smith, Jr., of Smithburg, in the county of Smith, in the State of Ohio, respectfully represents:

That your petitioner has invented a new and improved Method of Feeding Hogs, which he verily believes has not been known or used prior to the invention thereof by your petitioner. He therefore prays that letters-patent of the United States may be granted to him therefor, vesting in him, and his legal representatives, the exclusive right to the same, upon the terms and conditions expressed in the Act of Congress in that case made and provided; he having paid fifteen dollars into the Treasury, and otherwise complied with the requirements of said Act. And he hereby authorizes Hough W. Beadle, of H. W. Beadle & Co., of Washington, D. C., or his associate, to act as his Attorney in presenting the application, and in making all such alterations and amendments as may be required.

JONATHAN SMITH, Jr.

SPECIFICATION.

To all whom it may concern:

Be it known, that I, Jonathan Smith, Jr., of Smithburg, in the county of Smith, and State of Ohio, have invented a new and improved Method of Feeding Hogs, and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention relates to the fattening of swine and other pachydermata, and consists mainly in the employment of auxiliary and external causes for influencing a hog's mind or its equivalent, for the purpose of inducing it to partake of nourishment after its ordinary and natural appetite has been satisfied, by which means the vesicles of its cellular membrane are caused to aggregate fatty particles with great rapidity.

The manner of carrying my invention into effect will be fully described hereinafter.

In the drawing is shown a perspective view of the pig pen, or its equivalent, and its surroundings, with various forms of vertebrata in and adjacent thereto, the quadrupedal hogs, however, being represented upon the interior thereof.

To enable others skilled in the art to which my invention appertains, to use the same, I will now proceed to describe fully my improved method, with the appliances for carrying it into effect. It is a well known fact that fowls and other bipedal vertebrata are induced to assume an adipose state most rapidly, by a system of stuffing. This system is based upon the principles that a vertebrate will not, of its own accord, consume that amount of food necessary to cause it to assume the greatest adiposity in the shortest period of time, and consequently independent and external means must be brought to bear upon it to obtain the desired result.

The method of carrying this system into effect is usually as follows:

The fowl or other vertebrate to be fattened, instead of being permitted to partake of its chosen amount of sustenance in the ordinary manner, is compelled at regular and frequent intervals to absorb suitable rolls of prepared food, which latter are thrust into the esophagus while the mandibles are forcibly separated, the bird being, of course, securely held in the arms of the operator.

The results of this system are so very marked and beneficial, that numerous attempts have been made to

use it in fattening other members of the vertebrata, but, hitherto, without success.

Especially is it desirable to secure such marvellous results in quadrupedal mammals of the pachydermata. For obvious reasons, however, the system employed with feathered bipeds, cannot be used with hogs or their equivalents, without some modifications. Aside from the uncleanly habits of the animal, it is hardly practical to take the larger sizes in arms for the purpose of stuffing them.

By means of my invention, however, all difficulty is obviated. Without using brute force to compel the unwilling animal to partake of nourishment, I so influence its mind or its equivalent, by auxiliary and external causes, as to induce it to feed long after its natural and ordinary wants are fully supplied.

I accomplish this result preferably by means of an auxiliary hog, or other quadrupedal mammal or its equivalent, which should be preferably constructed with a prominent framework, attenuated body, extended limbs, acute proboscis, and active insinuating disposition.

The method of procedure is about as follows: The main or primary pachyderm, or hog, to be fattened, or its equivalent, is first supplied in any suitable manner with proper food, an abundance of which should be provided in a suitable receptacle. Upon this he is allowed to feed without molestation until his normal craving for food is fully and completely satisfied, at which time an auxiliary or secondary pachyderm or hog, or its equivalent, should be introduced into the apartment. The auxiliary hog, being properly starved beforehand, at once rushes with eager haste to the food receptacle and proceeds briskly to devour the contents of the same.

The sight of this procedure, however, awakens in the mind of the primary pachyderm, or its equivalent, those feelings of hoggishness so common among bipedal mammals of the genus Homo, and he at once devotes himself with renewed energy to the consumption of the food, in order that he may prevent his guest from devouring the same.

When the primary pachyderm has taken all that is possible under these pressing circumstances, the secondary may be removed and again confined until the next meal.

If desirable, however, a third and even a fourth auxiliary (of graduated sizes) may be employed to renew the flagging spirits of the satiated primary, after he has become accustomed to the presence of the secondary.

In the drawings, A represents the primary or main hog or its equivalent, which may be of any suitable breed and proper construction, it being provided, of course, with the usual organs of mastication and digestion.

It is desirable also, that the hog should be provided with a chivalrous mind, or its equivalent, in order that it may quickly resent the insult offered by the intrusion of the auxiliary, and act accordingly.

If desired, however, the caudal appendage may be entirely omitted, as this forms no part of my invention. B represents the secondary or auxiliary hog, who should be earnest, energetic, tenacious and impudent, with his mind devoted solely to his business. C represents the feeding trough. D represents the pen, provided with a gate *d*, having a suitable mammal attachment E for operating the same. F, G and H represent individuals of various nationalities and gender, and I, J, K, *p*, *q*, *r*, *s*, *t*, sundry and divers things, too numerous and tedious to mention specifically, which have been combined and arranged in my invention without regard to expense or taste.

But one single pen is shown in the drawing, though, if desirable, a series of pens may be employed, the same auxiliary being successively introduced to each.

This invention, it will be perceived, is based upon correct principles, long in use with other vertebrata, and its adaptation to this peculiar use supplies a want long felt among lovers and raisers of hogs.

membrane made adipose, by a system of feeding in two or more distinct periods of time, substantially as described.

7th. The specific device described, or its equivalent,



Having thus fully described my invention, what I claim as new and desire to secure by letters-patent is,

1st. The method described of influencing a hog's mind, or its equivalent, by means of external causes, substantially as described.

2d. A pachyderm or hog, having its mind, or its equivalent, influenced by external causes, substantially as described.

3d. A primary and secondary hog, or their equivalents, combined substantially as described.

4th. The combination of the main pachyderm and its auxiliary, with a feeding trough, substantially as described.

5th. An ascending or descending series of graduated pachydermata, combined with each other, and with a feeding trough, or its equivalent, substantially as described.

6th. A pachyderm having the vesicles of its cellular

consisting of the hogs A, B, pen D, with feeding trough C in southwest corner thereof, or thereabouts, gate d, manipulated by bipedal mammal E of the colored persuasion, or its equivalent, and individuals F, G, H, of various nationalities and gender, on north and east sides, in combination with the house I, barn J, wheel-barrow K, and general view p, q, r, s, t, in the distance, either with or without the sun x, the parts being arranged relatively, as described for the purpose set forth.

This specification, signed and witnessed this 39th day of October, 1870.

Inventor,

JONATHAN SMITH, JR.

Witnesses,

HENRY HANOVER,
JOHN BISMARCK.

OATH.

State of Ohio, County of Smith, ss.:

On this 39th day of October, 1870, before the subscriber, a justice of the peace in and for said County, personally appeared the within named Jonathan Smith, Jr., and made solemn oath that he verily believes himself to be the original and first inventor of the within described Improved Method of Feeding Hogs, and that he does not know or believe that the same was ever before known or used; and that he is a citizen of the United States.

GEORGE WASHINGTON JONES.

Justice of the Peace.

OFFICIAL LETTER? No. 1.

U. S. PATENT OFFICE,
Washington, D. C.
December 37, 1870.

JONATHAN SMITH, JR.,
Care H. W. BEADLE & Co.,
Solicitors of Patents,
Washington, D. C.

Please find below a copy of communication from the Examiner, in the matter of your application for a patent for Improved Method of Feeding Hogs, filed Nov. 32d, 1870.

Very respectfully,
BENJAMIN BROWN,
Commissioner.

Examiner's Room, No. 2114.

This application has been examined, and found wanting in patentable novelty.

Applicant himself admits that the principle of his invention is old, that is, that it is not new to fatten animals by stuffing them, but claims that his modification for a special purpose is novel and patentable.

A careful analysis of the case reveals the fact that the modification itself is old. It is an exceedingly common practice for dogs to eat what they do not need, for the purpose of preventing others from devouring the same.

If a specific reference is desired, applicant is referred to the original dog in the manger, who displayed precisely the hoggish qualities sought to be patented by applicant. The minds of both hog and dog are actuated by similar external causes.

Attention of applicant is also referred to patents of John Jones, February 31st, 1858, and John Smith, July 33, 1868.

The application is rejected.

A. CAPTIOUS,
Examiner.

AMENDMENT AND ARGUMENT.

To the Hon. Commissioner of Patents.

In the matter of my application for patent for improvement in Feeding Hogs, filed Nov. 32, 1870, I hereby amend by erasing after the word "hog" in the 3d clause of the claim the words "or their equivalents."

It is respectfully represented that by this erasure applicant's claim is strictly limited to hogs, and that consequently the Examiner's reference to dogs is not now pertinent. It is not believed that the Office will commit itself to the opinion that hogs and dogs are equivalents of each other; but such should be the view of the Office, it is respectfully informed, that if opportunity is afforded to applicant, he will endeavor to convince the Hon. Examiner, that a result can be produced by means of his big dog, Grabim, which cannot be obtained by means of any hog in the country.

It is further respectfully represented that the references were not pertinent to the case, as originally prepared. The dog in the manger might have reposed upon the dried grass until this remote period of time, without adding a single particle of adipose matter to the vesicles of his cellular membrane, but on the contrary, his continued stay would have insured the attenuation of his frame, the gradual wasting away of all his fibres, and the destruction of his cellular tissue.

The other dogs referred to may have accidentally employed the principles of my invention, but such accidental employment of the principle is no answer to my application.

The office is respectfully referred to commissioners' decision, 1870, page 7, which reads as follows: "Invention, within the meaning of the patent law, is the conception of some new and useful thing, and the embodiment of that conception in practical form. I think it cannot be doubted that this definition must include an *intelligent conception*."

In the light of this decision the office must hold, in order to make the reference pertinent, that the dogs to which it alludes *intelligently conceived* that they were aggregating fatty particles when they devoured the food referred to. It is not believed that the office will commit itself to this absurdity. A crude exercise of the principles which I employ should be no bar to the granting of a patent for the elaborate and finished invention reduced to practical form, especially in view of the immense benefits to flow from it, when it is fully introduced to the public. A re-examination is requested.

JONATHAN SMITH, JR.,
by H. W. BEADLE & Co.,
Attorneys.

OFFICIAL LETTER, No. 2.

DEPARTMENT OF THE INTERIOR,
U. S. PATENT OFFICE,
Washington, Jan. 32d, 1871.

SIR:—Your application for a patent for an improvement in Method of Feeding Hogs has been examined and allowed. The patent will be engrossed for issue on the receipt of twenty dollars, the balance of the fee payable thereon, if received within six months.

Respectfully, &c.
BENJAMIN BROWN,
Commissioner.

JONATHAN SMITH, JR.,
Care H. W. BEADLE & Co.,
Washington, D. C.

INVENTOR'S LETTER TO ATTORNEY.

SHARPSBURG, GRAB CO., MINN.

February 37th, 1871.

A. N. ONEST,
Solicitor of Patents.

DEAR SIR:—Having seen the issuance of a patent to Jonathan Smith, Jr., for Improved Method of Feeding Hogs, I write to ask your opinion in regard to the following method which is deemed an improvement on his.

In the practical working of his invention, the following objections would undoubtedly arise.

If a strange hog of the aggravating disposition alluded to in the patent, should be let into the pen, immediately after the primary had taken his full meal, the intense feelings of hatred and jealousy engendered thereby in the mind of the latter, would undoubtedly cause his blood to stagnate in its passage from the capillaries to the heart, and perhaps injure the pulmo-

nary arteries, or even the auricles and ventricles themselves. In any event, such a serious disturbance upon a full stomach, would necessarily make any ordinary hog billious. It is believed, therefore, that while the hog might be readily influenced to over-eat, no beneficial results would occur in consequence of the disturbed state of the hog's mind.

I propose, therefore, to introduce into the pen, at the proper period, instead of an aggravating hog, a well known hog of mild and gentle disposition and decent behavior. By this means the mind of the primary would be kept in a placid state, and be encouraged to over-eat by a generous spirit of emulation.

Will you please examine this and give me your views.

Yours, &c.,
DARIUS DODGER.

P. S. Since writing the above, I have had my attention called to the patents of John Jones and John Smith.

These patents are based upon the principle that over-eating is injurious to the agglomeration of adipose matter. As it still seems to be an open question whether over-eating is injurious or not, I would like to secure a patent for my improvement referred to, with a claim something like the following:

I claim a disturbing influence in combination with a hog's mind, or its equivalent, for the purpose of restraining it from over-feeding, if over-feeding is injurious, or an encouraging influence to induce it to over-eat, if over-eating is desirable, or its equivalent, substantially as described. Any proper disturbing influence may be employed.

If desired, a Hibernian, Dutch, Yankee or other mammal, with a stick or staff, may be used, or if preferred, the pig may be interrupted by the explosive noise of a caninal quadruped.

On the other hand, any proper encouraging influences may be employed.

An early reply will oblige

Yours, &c.,
DARIUS DODGER.

ATTORNEY'S REPLY.

DARIUS DODGER, Esq.,

DEAR SIR:—Your favor of the 37th ult. has been received.

I have carefully examined your alleged improvement, and am unable to discover any patentable novelty in it. The auxiliary hog in J. Smith's patent would, in time, of course, become well known to the primary hog. The broad claim you suggest is fully met by the patents you speak of.

J. Smith employs a restraining influence, and J. Smith, Jr., an encouraging influence.

It is barely possible that a claim of limited character might be obtained, but it would possess no real value.

When a patent of real merit is granted, a host of imitators usually spring up, who endeavor by some means to secure a patent, bearing some relation to the subject, for the purpose of deceiving the public.

The same amount of ingenuity that is exercised to secure these worthless combinations, if employed in a new field, would secure valuable results for the inventor and the public.

I advise you to employ your talents in some other direction than that proposed by you, and not waste your money in attempting to secure a worthless patent.

Yours, &c.,
A. N. ONEST,
Solicitor of Patents.

INVENTOR'S SECOND LETTER.

A. SHYSTERING,
Solicitor for Patents,

DEAR SIR:—I enclose you a copy of a letter sent to A. N. Onest, Solicitor of Patents in your city, and also copy of his reply.

I believe that a patent should be allowed for my improvement, and I wish you would give me your opinion.

Yours, &c.,
D. DODGER.

ATTORNEY'S REPLY.

D. DODGER,

DEAR SIR:—Your favor has been received. I have carefully examined your matter, and am clearly of the opinion that it possesses sufficient patentable novelty to entitle you to a patent. I suggest that perhaps a slight modification of your idea will much increase your chances for success. I observe that J. Smith, Jr., states, in his patent, that the hog's tail may be dispensed with, as it forms no part of his invention. I suggest that you make your hog's tail a distinguishing feature, and provide certain means for twisting it, for the purpose of restraining the hog from over-eating. With this modification, I feel confident that I can secure a combination of the hog's tail, or its equivalent, either attached to or detached from the hog proper, with a restraining or twisting influence, or its equivalent, substantially as described. Send me fifty dollars, and I will proceed with your case at once.

Yours, &c.,
A. SHYSTERING,
Solicitor of Patents.

P. S.—I have special facilities for the transaction of business, and can get a patent in any case with quick despatch, if persons are willing to pay well for it.

[For the American Bee Journal.]

About Hives.

We want a hive which can be completely closed and fastened, so that it may be set in a wagon, or sent off by Express, safely, whenever it is deemed desirable. It should not take over five minutes to fasten it securely, leaving sufficient ventilation. It should be of such shape that it will pack to good advantage, for convenience of winter storage and transportation. The frames should remain firm. In hives where the frames are not fixed, they will swing easily after being used in the machine.

I specify these needs, because it is so often necessary to move bees, and with many kinds of hives packing is inconvenient, taking up much time, and also because the subject of moving bees from one location to another, to gather different crops of honey, is attracting attention. This branch of the business would undoubtedly be carried on quite extensively, if they were as easily moved as so many boxes of beans. I have never yet practiced this, but want to get my hives in such shape that I can do it, as I believe in it. Will not those who have done so, give us some ideas on the subject?

J. L. HUBBARD.

Bricksburg, N. J.